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LECTURES
ON THE
THEORY AND PRACTICE OF MEDICINE;
NOW IN COURSE OF DELIVERY AT THE THEATRE OF ANATOMY AND MEDICINE, WEBB-STREET, SOUTHWARK.

BY

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&c., &c.

Treatment of typhus fever; treatment of the complications; causes of relapse. INTERMITTENT FEVER; *specific causes; action of malaria; symptoms of this fever; divisions; diagnosis; complications; state of the spleen; dropsy; treatment of intermittent fever.*

GENTLEMEN:—I did propose to bring before you M. Louis' MS. on this evening; but, on reflection, I think it better to terminate my own observations on fevers, and then to call your attention to M. Louis' valuable contribution. I proceed, therefore, now to speak of

THE TREATMENT OF TYPHUS.

The Treatment of typhus involves many considerations relative to

1. *The Fever itself.*
2. *Its Complications.*
3. *The State of Convalescence.*

The first question is as to the propriety and efficacy of bloodletting; this remedy may be employed, 1, for great febrile excitement; and, 2, for an inflammatory complication. If it be *early* in the disease we may cautiously adopt the plan described for acute synochus. The quantity of blood taken will then be accurately adjusted to the degree of excitement, or inflammation, and to the powers of the patient, and I know of no other mode of accomplishing so many objects. The repetition of the bloodletting must be indicated by the continuance of the symptoms, and the unabated strength of the patient.

When venesection is deemed inadmissible on account of the late period of the disease, and the feebleness of the patient, leeches are still a very important remedy for the complications; six, eight, ten, or twelve, may be applied to the temples, to the seat of pain, &c.

In the very commencement of typhus a gentle emetic is proper, and frequently highly beneficial.

In the course of the disease one grain of calomel, with two of the pilula hydrargyri, or half this dose, may be given every night, and some very mild aperient every morning, such as a draught with five or ten grains of rhubarb, and twenty of the sulphate of potass. The bowels must be gently moved, not purged.

A milder form of such remedies is the pilula hydrargyri, or the hydrargyrum cum cretâ alone, or with a few grains of rhubarb, taken each night, with or without a grain of the pulvis antimonialis.

A saline draught, with a little carbonate of potass, and sufficient lemon juice; or, better still, twelve drachms of soda water, may be given frequently for the dryness of the tongue and fauces, thirst, feverishness, &c.

Sometimes the state of diarrhœa, mucous discharges, melæna, and tympanitis, require their respective remedies; with some mild form of mercury, as the hydrargyrum cum cretâ, minute doses of ipecacuanha sometimes do good. Sometimes mild opiates, or opiate enemata, the decoctum hæmatoxyli, &c., are required to arrest diarrhœa; the introduction of a catheter is frequently of great utility in effecting the discharge of flatus, in the case of tympanitis.

At a remote period, tonics, as quinine and wine, may be required to sustain the strength of the patient, whilst, as we may suppose, the intestinal ulcers are undergoing the process of cicatrisation.

But a less doubtful remedy is, whilst we regulate the bowels, to administer the mildest kinds of nourishment: asses' milk, milk with soda water, or with water thickened with arrow-root, may be given in appropriate quantities and proportions from the beginning.

In the complications local bleeding and blisters are the most efficient remedies; the

head and chest are relieved by applying leeches and blisters. The parts over which blisters have been applied are very apt to slough; these must, therefore, be removed early.

For delirium a spirit lotion applied to the head, and pediluvia to the feet, are of great value.

The principal causes of relapse are

1. Improper diet, and
2. Undue exertion.

I need scarcely observe that these must be carefully avoided.

In every point of view the following remedies are most important, both during the course of the disease and of the convalescence, viz.:—

1. The recumbent posture.
2. Muscular repose.
3. Extreme attention to cleanliness.
4. The full fresh air.

In enjoining the recumbent posture and muscular repose it is necessary, however, to guard against local pressure, on the sacrum especially, to prevent gangrene. A pillow placed variously, a slight change of posture, are very important, whilst all muscular effort is carefully avoided.

Extreme cleanliness is required to prevent the sloughs. Free ventilation is, with frequent ablution, a restorative of extreme value. The sinking form of typhus requires the prompt and efficient use of wine and other stimulants, with a strict attention to the means of maintaining or restoring the temperature over the surface, and at the extremities.

I have an interesting specimen of ulcerations of the intestinal glands, which occurred in a patient of Mr. R. Ceely, of Aylesbury, aged 57. The case was one of the fever prevalent in and near Aylesbury, and arising, in Mr. Ceely's opinion, sometimes from malaria, sometimes from contagion. A series of such cases, drawn up by such a pen as Mr. Ceely's, would be of inestimable value.

III.—INTERMITTENT.

The specific cause of intermittent fever appears to be marsh effluvia, emphatically termed miasmata. Some subsidiary causes are—1, malaria; 2, the north-east wind; 3, spring and autumn; 4, the night air; 5, cold and wet; 6, fatigue; 7, the depressing passions; 8, defective clothing, diet, &c.

Marsh effluvia, the specific cause of intermittent, are engendered under a very peculiar combination of circumstances only, the stagnation of fresh water over fresh vegetation in the state of decay.

1. Mere stagnant water does not produce intermittent, nor does pure watery vapour. Nearly double the quantity of rain falls in some of the western counties of England, compared with its eastern shores. There can, therefore, be no deficiency of stagnant water. Yet there are no intermittents. Flooded or inundated districts are not liable to ague. The Delta of the Nile is free from this disease. The same remark applies to places where the thickest fogs prevail.

2. Nor is it sufficient that water stagnate over fresh vegetation, if this be in a state of growth. Flooded, or water meadows, as they are termed, in which vegetation is frequently most luxuriant, do not induce intermittent.

3. Even the actual growth of the vegetation is unnecessary, if it be not in a state of decay or putrefaction. The bogs and peat marshes of Ireland and Scotland are not liable to induce intermittent.

4. Far less will water which does not stagnate give origin to this disease. The banks of rivers and of lakes are free from intermittent fever.

5. It is also an essential point that the water should be fresh water; salt water marshes, those which surround Venice, for example, do not engender intermittent. A marsh near Minehead, Somerset, four miles in length, and one in breadth, washed by the Bristol Channel, is free from this disease. A salt water marsh at the mouth of a river may, however, be surrounded by another of fresh water, and hence, if the latter fact be inadvertently overlooked, be erroneously supposed to induce ague.

6. Compare, with these facts, that of the prevalence of intermittent wherever fresh water stagnates over decaying vegetation, and the disappearance of this disease whenever the marsh or fen is effectually drained. The coast of Lincolnshire, in our own country; the ill-famed Walcheren, situated "below the level of the sea at high water," "divided into small inclosures by ditches, which serve as drains, two-thirds full of water," "the soil an alluvial detritus carried down by the Rhine and Scheldt;" the Pontine marshes; will afford us sufficient examples of the truth of this proposition.

It sometimes occurs that the base of a mountain or considerable hill may be free from intermittent, whilst a marshy tableland, in an elevated part, may be liable to ague. This is the case with Pamphill, Wimborne, Dorsetshire.

In general the presence of a river, the stream of which was even moderately rapid, would indicate the absence of ague; whilst that of certain plants, the peculiar growth of marshes, as the juncus vulgaris, the iris lutea, would indicate the probable prevalence of that disease.

7. But then we are met with the fact, that intermittent fever occurs where the marsh effluvia cannot exist. Occasionally we see intermittent in London: James I. and Oliver Cromwell both died of this disease; it prevailed even in the time of Sydenham; it was seen, occasionally, by Willan and by Bateman; and it was not uncommon so

recently as the year 1828. Intermittent seems also, from the remarks of M. Andral, sometimes to originate in Paris. Dr. Willan observes, in his report for the autumn of 1796, "Contagious malignant fevers bore a smaller proportion than usual to other acute diseases; neither have intermittents this autumn been very numerous. The latter occur, for the most part, in persons who have resided some time in the neighbourhood of marshes. We must not, however, consider marsh effluvia as the universal cause of intermittents, since it is found that persons constantly residing in the most healthy parts of the metropolis are sometimes affected with them, as happened in two cases above put down amongst the periodical diseases." Dr. Bateman relates, in his report for the spring of 1805, "The majority of the intermittent fevers, which we occasionally see in London, is brought from the marshy parts of the country; but instances sometimes occur which cannot be traced to the miasmata of marshes, nor even to unwholesome exhalations from damp and uncleanly situations of any kind. One of the patients in the preceding list had not been absent from London for many years, and has lived, during the last eight months, in a court between Holborn and the north side of Lincoln's-Inn Fields; yet he was attacked with a very obstinate tertian." M. Andral says, "Most of the patients had contracted the fever in the very centre of Paris, where they had resided either several months or more than a year.

Does intermittent fever, then, ever arise from the malaria of a crowded city? Does London, in 1660, differ from the same metropolis in 1835, merely by the deficient condition of its drainage, at the former period, compared with the latter? This is a highly interesting question, like too many others in medicine, still undetermined."

Malaria is the first of those subsidiary causes of intermittent which I have enumerated; exposure to the north-east wind is the second. The prevalence of this wind in 1828 seems to have produced intermittent over the country, especially in the fenny districts, but also in districts in which intermittent is usually unknown. Here another question, full of interest, occurs; can the north-east wind alone induce intermittent in those not predisposed to this fever by previous exposure to the influence of marsh miasmata, or of malaria; is it a cause so subsidiary as to require the existence of the seeds of intermittent to be already sown in the system? Whatever may be the truth, in reference to this question, there can be no doubt of the powerful influence of this wind in inducing, or reproducing, intermittent in the predisposed. And Dr. Bateman justly observes,—"In attempting to ascertain the origin of intermittents, one circumstance requires attention; viz. the period during which the influence of miasmata may lie dormant in the constitution, or the time which may intervene between the exposure of the person and the commencement of the disease. An inattention to this circumstance tends very much to invalidate the conclusion which might be drawn from the cases of Dr. Beddoes. The first case which appeared at the Dispensary commenced in March; the patient had resided in London since the beginning of December, at which time he returned from Essex. About the same time, two patients, attacked with ague, who had also returned to town from Kent or Essex early in December, applied to a medical friend in the city. In these instances, a period of three months had elapsed between the infection (if the term may be used) by miasmata, and the appearance of the consequent ague.

"Another patient in the above list, after residing several months at Sheerness, returned to London in November last, and in the beginning of the present month was seized with tertian, having lived, during an interval of nearly half a year, in Liquorpond Street, Gray's-Inn Lane. From these facts, it would appear that the latent period of intermittents is very indefinite; probably greater and more irregular than that of continued fever, according even to the limits allowed by Dr. Haygarth." M. Andral makes some similar observations: "Of the patients affected with intermittent, the smallest number had been exposed to the influence of marsh miasmata. In some, the fever began in the very place where the miasmata existed, and where intermittent was epidemic. In others, the first paroxysm took place after the patient had left the source of the miasmata." "One patient, who had lived with impunity during two months at Brie-Comte-Robert, where there were many cases of fever, was seized with the first paroxysm on the day of his arrival at Paris. Another had only experienced a little headach when he quitted Rochefort, where intermittent was epidemic; on his arrival at Paris he was seized with a first paroxysm.

"In another patient, a mere visit to a marshy country renewed an intermittent, which had originated in a marshy district, but which had ceased during two months."

The influence of spring, and especially of autumn, in inducing or renewing intermittent fever, is well known. In aguish districts, these are the seasons during which the inhabitants suffer most severely; and after exposure to the miasmata of marshes, or after having actually experienced an attack of intermittent, although a considerable interval may have elapsed, this fever is frequently excited by the atmospheric circumstances of spring or autumn. Sir Gilbert Blane observes,—"when those who have imbibed the poison, are transported into

countries where the air is in a state of greatest purity, it is in the autumnal months that they are most commonly attacked. There was a very striking proof of this after the campaign of North Holland, in 1799. In the following year, some of the officers and men who had escaped the disease, were taken ill in the autumnal months; and none that I heard of, at any other season of the year."

The other well-known subsidiary causes of intermittent are, exposure to the night air, or to wet and cold, or to fatigue, or depressing passions; defective clothing, diet, &c. In fact, any cause of exhaustion of the system, whether this act through the nervous, muscular, vascular, or digestive organs, may induce ague in the predisposed. Sir G. Blane observes,—"I was informed, in February, 1811, by a field-officer, who came home from Portugal on account of bad health, that those men of his own regiment, as well as of others who had served before in Walcheren, were, upon the first exposure and fatigue, rendered unfit for duty, chiefly by intermittent fevers, so as to leave not more than a third part of them fit for service, a proportion of such far above that of the army in general."

The modes of prevention of intermittent are so interwoven with a knowledge of their causes, that I have bestowed greater time and space upon this subject than I should otherwise have thought it right to do. With the same view, it is important to remark, that, as the inhabitants of crowded towns are less subject to typhus than those newly arrived, so the inhabitants of marshy districts are less subject to intermittent fever than strangers,—the acclimated than newcomers. It is therefore particularly incumbent upon visitors and "fresh-men" to be very careful to avoid the subsidiary and auxiliary causes of this disease.

It would be interesting to inquire—what degree of exposure to marsh effluvia is sufficient to sow the seeds of an intermittent; during what period of time these seeds generally remain latent. Dr. Wells says those newly arrived in an aguish district do not become affected with intermittent fever in less than eight or ten days; and that "agues often do not appear until spring, though their causes were applied in the preceding autumn." Dr. Wells adds, "I have known three instances of this latter fact myself." He even suggests that the presence of the influence of these seeds of ague in the system may,—on the principle that "the existence of one disease in the human body, or even a tendency to one disease, often renders it less susceptible of another," actually protect the individual, and the population indeed, from phthisis; for he endeavours to prove that, where ague prevails, phthisis rarely occurs.

When the seeds of intermittent exist in the system, as in those who have been exposed to marsh effluvia, or who have already recently experienced the disease, exposure to the other subsidiary causes will, however, excite the febrile actions and induce the disease more promptly.

The course of intermittent is marked by successive distinct cold, hot, and sweating stages; and these are recurrent, every second, or every third day, or at other intervals, giving origin to the designations, quotidian, tertian, quartan, &c.

The quotidian has an interval of twenty-four hours, a paroxysm of moderate severity, but of long duration, beginning with a slight cold stage, generally in the morning. It is apt to assume the remittent form. It occurs principally during the spring.

The tertian has an interval of forty-eight hours, a severer cold stage, a shorter paroxysm, recurrent generally about noon, and followed by much perspiration. This is the most frequent form of intermittent, and is observed to be milder in spring than in autumn.

The quartan has an interval of seventy-two hours, a short paroxysm, and a long intermission. The paroxysms usually occur after noon, with a long and severe cold stage a gentle hot stage, and slight perspiration. The quartan intermittent fever occurs chiefly in autumn, is apt to prove obstinate, without having any tendency to assume the remittent form.

To reduce this question to numbers, M. Andral observes that of 25 quotidians the paroxysm in 11 began between 4 and 11 A.M, 8 between 11 and 2, and 6 in the evening; of 19 tertians, 12 began before 10 A.M., 4 at noon, 1 at 2 P.M., and 2 in the evening; of 7 quartans, 1 began in the morning, the rest after noon; in one case, which changed its type, the paroxysm came on in the morning whilst it was quotidian, and in the afternoon when it became quartan.

Of the relative numbers of the different types of intermittents, we have the following table from M. Louis and M. Andral.

	Louis.	Andral.
1. Of quotidians....	40	28
2. Of tertians.....	36	19
3. Of quartans.....	8	7
4. Irregular.....	25	2

Intermittent fever sometimes assumes the reduplicated, or merely remittent forms; and sometimes every kind of irregularity in form, and in the intensity of its paroxysms, or of their different stages.

The recurrence of the paroxysm, although not always accurate in point of time and hour, in different instances, affords a very important means of diagnosis in obscure cases. The rigors in suppuration and in hectic have not even this degree of regularity of return.

The Symptoms.—The paroxysms of intermittent fever begin with yawning and

languor, and a sense of creeping along the back; the patient then shivers with cold; the countenance and general surface are pale, shrunk, and cold; there is that state of the skin termed "cutis-anserina," and the nails assume a livid hue; the respiration is sibilant; the pulse is small, and frequent, and perhaps irregular; there are anorexia and thirst; the tongue is dry and clammy; the urine is limpid.

The cold stage gradually subsides, and the countenance becomes flushed and tumid, and the eyes injected, whilst the general surface is turgid, hot, smooth, and dry; there are frequently acute pains of the head, throbbing of the temporal arteries, intolerance of light and sound and delirium; the respiration is frequent, but less anxious; the pulse strong, full, and frequent: there is urgent thirst, with continued dryness of the tongue; the urine becomes high coloured.

In the sweating stage, the countenance assumes nearly its natural appearance; the skin loses its tumidity and heat, and becomes covered with perspiration. The head is relieved, and sleep often supervenes; the respiration becomes free, the pulse nearly natural; the urine deposits a degree of sediment. The observations made upon the urine by the older writers on intermittents, are confirmed by M. Andral, in the "Clinique Médicale;" ed. 1, t. i, p. 479.

The paroxysm over, the patient is left somewhat pale and languid, and there are headach and anorexia. In the commencement of intermittent fever, the apyrexia is, however, sometimes almost free from indisposition. The health is, at length, gradually impaired; the complexion assumes the hue of painters' putty, and emaciation and anasarca supervene upon the other symptoms.

The Diagnosis.—There are four affections from which it is essential to distinguish intermittent: they are—

1. Hectic.
2. Suppuration.
3. Stricture.
4. Retention of Urine.

The symptoms of fever, in some cases of hectic, assume the intermittent type in such a degree as to resemble intermittent. It must, however, require but ordinary care to detect the primary and local disease.

The danger of an error in the diagnosis is still greater, when deep-seated and undetected suppuration has taken place. The paroxysms of fever are such as to impose upon the most experienced for a time. In cases of intermittent fever, it is well, therefore, to examine for visceral disease, especially in districts little liable to ague, and to bear in mind, that even amongst endemic ague, we may have cases resembling intermittent, but, in fact, of a totally different nature.

Stricture, and the use of the bougie, are not unfrequently attended by rigor, fever, perspiration, &c.; in fact, a paroxysm of intermittent fever. Repeated quotidian paroxysms occasionally occur from stricture, and are treated for intermittent, until that stricture is detected, and removed by the use of the bougie.

The same fact has been observed in cases of partial retention of urine. The interesting particulars of such a case were detailed to me by Dr. Farre. The catheter unveiled the mystery and cured the fever.

The Complications of intermittent fever are frequently, like the fever itself, periodic,—intermittent or remittent: and sometimes, without fever, there are similar paroxysms and intermissions, or remissions, of local affections.

The principal of these are,

1. Hemicrania.
2. Pain of the Eyebrow, or Browague.
3. Thoracic Pain.
4. Pain of the Testis.
5. Other Topical Pains.

These complications of intermittent deserve the most attentive consideration. One of them frequently becomes the prominent malady, and masks the principal disease. Sometimes, as I have stated, without the febrile symptoms, a local affection assumes an intermittent or aguish form. In other cases, the patient who has once had ague, becomes subject to languor, and vague, aching, weary pains, which are only to be traced to their cause by the utmost attention.

These affections sometimes assume a more aggravated form, and there are,

1. Headach, delirium, coma, or amaurosis.

2. Thoracic pain, cough, asthma, or syncope.

3. Colic, cholera, or diarrhœa.

These local affections may precede, accompany, or follow intermittent fever; or they may exist variously in the intermittent or remittent form, independent of febrile symptoms. They will be particularly noticed hereafter.

The most frequent of these complications is the cephalalgia, hemicrania, or browague. In the cases observed by M. Louis, cephalalgia occurred in thirty-seven out of forty cases of quotidian, in thirty-six out of thirty-eight of tertian, in seven out of eight of quartan, ague.

But, perhaps, the most extraordinary symptom is the splenic pain, tenderness, and tumour. These are frequently observed in the beginning of intermittent, and in the cold stage of each paroxysm especially. After a time, this organ is apt to become permanently enlarged.

The connection between the paroxysm of intermittent and the state of the spleen, and the effect of cinchona and arsenic, are high-

ly interesting; and it is an equally interesting question, whether the same connection subsists in the cases of ague-like paroxysm from suppuration, stricture, or retention of urine.

The principal permanent complications are,

1. Enlargement of the spleen.
2. Anasarca.

There is a prevailing notion or suspicion, amongst the French pathologists, that the source of intermittent is the spleen. This organ becomes tender and tumid, especially in the cold of each paroxysm, and eventually permanently enlarged, constituting the "ague-cake," in the course of the disease, if this be protracted.

M. Louis observes, with his wonted reserve, "if we cannot affirm that intermittents consist in a change, more or less severe, of the spleen, because it preserves its size in the intervals, and because these fevers may be removed whilst it is undiminished; still this organ deserves great attention from those who investigate the subject of intermittents, since it is evidently affected in the commencement in many cases, and much more frequently than the other organs." M. Andral asks—"What is the nature of the change experienced by the spleen in intermittent fevers? Is it cause or effect of the fever?"

I must add a few words respecting the dropsy which occurs in intermittent. Dr. Wells observes—"Dropsy is another well-known consequence of ague. Whenever I have observed dropsy of the abdomen to arise from this cause, which, however, has not been often, swelling of the lower extremities have always preceded it. Sir John Pringle remarks that the dropsies which occurred after ague in the Netherlands, generally begin at the feet, and rose gradually to the belly." M. Andral observes,—"When dropsy is the result of disease of the liver, ascites almost constantly precedes the anasarca. In the patients (affected with intermittent) on the contrary, the anasarca was first observed."

It appears probable to me that the enlarged spleen of intermittent may induce anasarca, by pressure or counter-pressure upon the ascending cava; whereas ascites may be produced, in disease of the liver, by interrupted circulation through the vena portæ.

The morbid anatomy of intermittent fever seems really to be little known. The spleen is the organ chiefly and most frequently affected; it becomes enlarged. This enlargement is discovered during life by recurrent pain, dulness of sound on percussion over the false ribs of the left side, and, at length, on examining the region of the spleen by pressure. The spleen may remain enlarged, ascend, or descend, and constitute a mode of ascertaining the existence formerly of intermittent fever, without materially affecting the health.

The treatment comprises the measures adopted,—1, during the interval; 2, during the paroxysm; 3, in the case of imperfect remissions; 4, for the complications; 5, against relapses.

During the intervals, the functions of the stomach and bowels must be principally attended to: unless there be excitability of the stomach, a gentle emetic does good; this should be followed by a mild dose of the hydrargyri submurias, and an aperient draught. Afterwards the secretions of the bowels must be gently excited.

If there be irritability of the stomach, the emetic and aperient medicines must be avoided, and the secretions and the bowels will be best excited by means of large enemata of warm soft water: the proper mode of administering this remedy is to inject the water as slowly as possible, and as long as possible; the colon is, in this manner, first filled, then distended, and stimulated to contraction; the medium quantity used is from fifty to sixty ounces; and its efficacy, in removing the load of the colon, and in restoring the bile to its channels, is quite extraordinary.

The functions of the stomach and bowels being thus regulated, the next object is to prevent the coming paroxysm.

The different preparations of the cinchona afford the most effectual means of accomplishing this object; a draught, with two or three grains of the sulphate of quinine, with double the number of drops of the dilute sulphuric acid, may be given every hour, or every two hours; or large doses of the pulvis cinchonæ flavæ may be given at similar intervals. If necessary, the doses of these medicines may be augmented and the intervals between them diminished.

If the cinchona fail, the liquor arsenicalis may be given in the dose of from six to eight, ten, or twelve, minims, twice or thrice a day,—watching against sickness, griping, diarrhœa, or mucous discharges, denoting fret, or inflammation of the mucous membrane of the stomach and bowels.

There is this difference between cinchona and arsenic: the former may be given in any dose which the stomach can bear, and may be administered to produce a prompt effect—to prevent the coming paroxysm; the latter must be given with caution, continued so as to effect a slower impression on the system, and gradually to subdue the disposition to returns of the paroxysm. With both these objects, the cinchona and the arsenic may be given simultaneously.

It would be impossible and useless to enumerate all the remedies which have been proposed as cures of intermittents: every kind of stimulant, every kind of astringent; mental, as well as bodily, impressions; have

been employed with occasional success in preventing the return of the paroxysms.

During the paroxysms various remedies have also been proposed. Venesection has recently been highly recommended in the cold stage by Dr. Mackintosh of Edinburgh, to cut short the paroxysm and obviate the disposition to its return. Venesection has also been instituted in the hot stage. Warm diluents in the cold stage, and salines in the hot, are otherwise perhaps the only safe or useful remedies during the paroxysm of intermittent.

There is a circumstance in which the remedies proper during either the intervals or the paroxysm, can be efficiently administered; it is where there are, after the violence of the paroxysm is over, but imperfect remissions: it is then necessary to give mild mercurials and aperients, to correct the secretions and regulate the bowels; and to wait for a more perfect remission of the febrile symptoms, and the opportunity of giving the cinchona or the arsenic.

The next object is to relieve the complications: the pains and the irritability of the stomach sometimes require opiates; the affection of the spleen is best remedied by local bloodletting, leeches, or cupping.

To prevent intermittent, and to prevent relapses, a mild nutritious diet, a moderate quantity of wine, the quinine, care to guard against cold, damp, or exposure to the night air, the north-east wind, &c., are the principal remedies. To prevent relapses especially, the patient should keep the secretions and bowels in order; should live on the simplest and most wholesome dishes; take wine moderately, and the quinine occasionally, but especially in the autumn and spring, on the slightest feeling of neuralgia or of aching, weary pain, or of any aguish symptom, however slight.

Dr. Fordyce observes,—"When intermittents cannot be cured in fenny countries, they give way easily on the patient's coming into dry air; as I have observed in patients brought from Lincolnshire to the hospital, who have been easily cured, although the same remedies had been used before without success."

Precisely the same principles obtain in the treatment of various diseases of intermittent character, as hemicrania, brow-ague, neuralgia. The secretions must be restored, and the quinine, the arsenic, &c. must be tried.

Dr. Collins on Turning.—"I know of no operation more truly dangerous, both to mother and child, than the artificial dilatation of the os uteri and turning the child; and confident I am, that the practitioner who adopts such a line of practice, *except from strict necessity*, will often have abundant cause to regret his proceedings."

LECTURES
ON
MATERIA MEDICA AND THERAPEUTICS;
NOW IN COURSE OF DELIVERY
AT THE
WINDMILL-STREET SCHOOL OF MEDICINE
BY
GEORGE G. SIGMOND, M.D.

Assafœtida.—*Division of medicaments which act on the olfactory nerves; description of the plant producing assafœtida; its remedial powers.* Sagapenum. Bubon Galbanum; *botanical description.* Common Rue; *medicinal qualities.* Madder; *characteristics; effects.* Black and White Mustard. Myrrh.

Gentlemen:—Linnæus, to whom every object in creation was a fresh source of research, was particularly struck with the effect upon the animal economy of the aroma issuing from vegetable substances, a subject which had not altogether escaped the attention of medical men, but to which they never directed any material portion of inquiry. In those instructive volumes written, for the most part, by himself, or by some of his immediate disciples, to which the name of "Amœnitates Academicæ" has been given, are to be found some very curious essays upon odours. One of the postulatums of Linnæus was, that the qualities of medicines are, in a general way, to be determined by their effects on the organs of smell and of taste; and he likewise laid it down as a rule, that the sapida, or those which strike the taste more sensibly than the smell, operate upon the vascular system, whilst the olida, or those which more sensibly influence the olfactory nerves, act on the medullary or nervous system. He says, "Sapida in fibras, olida in nervos agunt."

Wahlen, a distinguished pupil of the great leader in the sciences of botany and materia medica, drew up a system founded upon the idea that odours indicate the qualities by which different therapeutic agents are distinguished; and in a paper entitled, "Odores Medicamentorum," in one of the volumes to which I have alluded, explains these views; he divides them into seven classes.

1. Aromatici, such as cinnamon, cardamom, &c.
2. Fragrantes, such as saffron, jasmin, &c.
3. Ambrosiaci, such as musk, musk geranium, &c.
4. Alliacei, such as onion, leek, garlic, assafœtida, galbanum.
5. Hircini, such as herb Robert.

6. Tetri, such as opium, henbane.

7. Nauseosi, such as white and black hellebore.

He very ingeniously points out the effects upon the circulation of the three first of these classes; upon the excretory systems of the kidneys, the uterus, and the skin, of the two following; and upon the nervous system, and upon the abdominal viscera of the two last; this idea has been often alluded to by continental writers, and many dissertations have appeared.

That the female system is very particularly influenced by odours has been long observed; the exceeding delicacy of the covering of that part of the facial nerves which more or less are connected with the olfactory and respiratory organs, renders her much more susceptible than man, of the impression which is conveyed by the sense of smell. Some of the medicines that we possess, which stimulate the uterine system into action, are remarkable for their fœtid odour, and to this property has been ascribed their power and their rank as emmenagogues. Formerly fumigations of assafœtida and galbanum were frequently recommended in any of the affections to which females were subject; and in hysteria they obtained the highest commendation; in the present day, however, the great desire is, when these remedies are considered necessary, to conceal their nauseous odour.

It would appear that Pallas, the celebrated Professor of St. Petersburg, had some seeds sent to him of a plant growing amongst the mountains of Ghilan, in Persia, from which was obtained the gum known to us under the name of assafœtida. He with great assiduity and care watched over the rearing of some plants from these, and was rewarded for his labours by their arriving at full vegetation; of these he transmitted some specimens to some of the botanists of the day, and amongst them to Dr. John Hope, at that time Professor of Botany in Edinburgh, the father of the present Professor of Chemistry, who is as much distinguished for the clearness of his exposition of the paths of science, as he is for the urbanity and elegance of his manners.

Two roots were sent; both of these were planted; one of them died, but the other arrived at its full fructification, and from its seed has sprung the plant which has been delineated by successive botanic writers. It is described by Dr. Hope as having branches, naked and spreading, the three lower ones alternate, and supported by the concave membranaceous petiole of the imperfect leaf; the upper ones in whorls, all of them supporting a many-rayed, sessile, plano-convex, terminal umbel, besides from three to six branchlets, planted on the outside, bearing compound umbels. The stem is surrounded at the base with six radical leaves, somewhat glaucous; these are pinnatifid, petioled, spreading, three-lobed, with incised acute decurrent leaflets, of a deep green colour. The footstalks of the lower leaves are flat above with a raised line running longitudinally through the middle of them. The umbels have from twenty to thirty general spreading rays, and from ten to twenty partial ones, with subsessile florets. The florets of the sessile umbels are fertile, of the peduncled umbel, mostly abortive. The petals are yellow, equal, flat, ovate, at first spreading, but afterwards reflexed, with the top ascending. The filaments are awl-shaped, longer than the corolla, curved inwards, and bearing roundish anthers. The germen is inferior, turbinate, with two reflexed styles, and an obtuse stigma. The fruit is oval, compressed, marked with three distinct ribs, separable into parts. The "Philosophical Transactions" contain this account, and likewise the opinion of Sir Joseph Banks. This certainly does not appear to be the plant which Kæmpfer has described, from a specimen obtained by Hablize, who accompanied Gmelin through Russia, to the mountains of Persia, and which, among other Persian roots, was transplanted to Astrachan; but it would appear that several species yield a fœtid gum, and the sagapenum most probably is derived from the ferula Persica. That a gum resin, called assa, issues from the cut root of several species of ferula, in the form of milk, and concretes into a dry mass, which, from the first moment, gives forth a most fœtid odour, there can be now little doubt, and that a considerable traffic is carried on in Persia by attention to the best mode of obtaining it. It flows much more copiously from roots growing in the plains than on mountains, and from old plants rather than from young ones. Kæmpfer has detailed the mode by which juice is obtained in the purest form. Bontius, however, states, that there are two kinds of assafœtida obtained from the same plants, the one obtained from the leaves and stems, the juice of which is expressed and dried, whilst the other comes from the root. In the "Amœnitates Academicæ" will be found all that is interesting upon these points, and upon all the circumstances which render the drug either highly powerful in its odour, or exceedingly inert. The root should be four years old before the juice is obtained, and in the autumn the incision is made, after the stems and leaves are twisted from the root, which is exposed, by digging away the earth that surrounds it. It is left for forty days, screened from the sun; then the top is cut off transversely, and after forty-eight hours the juice which has exuded is scraped off, and another transverse section made. The operation is repeated three times, and then the root remains untouched for eight or ten days before another section is made; it is then repeated, and as often as

any flow takes place. The gum appears in irregular masses, and is sent to this country in casks, in mats, and in cases. The pieces vary much in their colour, sometimes they are of a bright yellow colour, at others dark brown; sometimes they are quite white; the best is supposed to be that which is clearest, and of a pale red colour. Its taste is somewhat acrid. Its odour is its striking characteristic; it is alliaceous, highly fœtid, and the better the quality, and the fresher it is, the more is the odour given forth. Kæmpfer says that he can affirm that a drachm of that which is recently poured forth has a greater fœtor than a hundred pounds of that which is sold. From its fœtor it has been quaintly designated *stercus Diaboli*.

I will not trouble you with the very learned disquisitions which have been entered into as to the knowledge of Dioscorides, of Theophrastes, of Hippocrates, of assafœtida, which they are supposed to have used under the name of *οπος σιλφιον*, or of that of Pliny and Celsus, who speak of Laser, or Laserpitium, in such a manner as to have led the moderns into the belief that it was of this drug they were discoursing.

Bauhin, Bodæus, Geoffroy, Miller, are the different authorities to whom I must refer you; their speculations are always ingenious upon these subjects, but are seldom useful. Occasionally when a drug is very highly lauded by the older writers, an anxiety to know if we now possess it is very praiseworthy, but as is the case on this occasion, it sometimes excites a great deal of controversy, without leading to any practical result. It is true that of the plant of which Pliny speaks, he says, that it is so rare it ought to be kept as a public treasure. The Arabians are supposed to have been acquainted with it under the name of altiht, but in the school of Salernum the name assafœtida occurs.

Cartheuser, Neumann, Trommsdorff, Pelletier, and Brande have chemically analysed this substance; it seems to be formed of resin, of gum, of bassorine, of volatile oil, with some traces of malate of lime, and some of the phosphates; it gives up its virtues to alcohol and to ether, and may be diffused through water by trituration, and a milky, opaque mixture is formed. Both spirit and water become imbued with its odour on distillation.

Notwithstanding the fœtor, which is so very disagreeable to the inhabitants of this country generally, it is highly prized on this very account as a condiment. We learn from Garcias and from Kæmpfer that it is a very favourite part of the culinary arrangements of the Indians, and in some parts of the Continent it is by no means disliked. In Italy the smell is preferred to that of musk, and some of the lovers of good eating, in different parts of Europe, are accustomed to rub their plates with a small quantity of it. Many of the best practitioners were wont to prescribe assafœtida very largely, more especially those who have written on nervous diseases; amongst these Boerhaave, who speaks in the strongest terms of its efficacy. Whytt, too, had the same opinion of its value.

In asthma it has been highly spoken of, but more particularly in the acute spasmodic asthma of infancy. A mixture of two drachms of assafœtida, an ounce of the liquor of acetate of ammonia, and three ounces of the aqua pulegii, given in the dose of a teaspoonful every half hour, is a most valuable remedy, producing neither nausea nor any bad effect. This has also been successfully administered as an enema. In spasmodic cough this often acts as a charm, provided it be not given when hectic fever, hæmoptysis, or pulmonary disease be present. In epilepsy it has been recommended; it is also serviceable where worms infest the intestinal canal. In the torpid state of the bowels to which people advanced in life are subject, this is very useful in the form of pill.

The mistura assafœtidæ of the London College is made by triturating five drachms with a pint of water. It is not very likely to be given internally, but as an enema it may with great propriety be recommended. The tincture is not much more agreeable; it is made by macerating, for fourteen days, five ounces of assafœtida in two pints of rectified spirit of wine, and straining; a drachm of this is given as a dose. When made into pills, five to ten grains may be given, and this has been repeated for several days in caries of the bones, and in the secondary effects of syphilis, with some advantage. Its advantages as an emmenagogue are not very striking when given alone; it, however, has had many good opinions expressed of it by some able men. It is superior in power to

SAGAPENUM,

A gum resin, the concrete juice of some plant growing in Persia, which has an odour and taste resembling assafœtida. It comes to us in tears or in masses of an olive or brownish-yellow colour; it is partially soluble in water, and in strong alcohol; it is occasionally employed, and in a dose of eight grains has been given. I know nothing of its value, nor am I aware of its having been tried to any extent by any practitioner upon whose authority I can rely: it was known to Dioscorides, and mentioned by the name it now is known by. It enters into the composition of the confection of rue of the London and Dublin Colleges, which is generally considered to have antispasmodic powers, and to be used as an enema.

BUBON GALBANUM.

Galbanum is a gum resin which is the produce also of a tree of the umbelliferous

class, growing in some part of Persia. Linnæus ascribes it to the bubon; Hermann doubts it, and Tournefort and Commelinus attribute it to some other species. Mr. Don believes it to be obtained from a plant which is closely allied to the genus Siler, and upon his authority in our present Pharmacopœia it is denominated galbanum officinale. In Regnault's "Botanique" it is called ferule galbanifere; and it is also known under the name of ferula Africana galbanifera. The gum resin is dry, tenacious, when fresh of a whitish colour, but becoming, on being kept for any time, of a yellowish or reddish colour; when it becomes dark brown it has lost much of its power. It is brought to us from Turkey in cases which contain from one to three hundred weight. According to Geoffroy it is an exudation which either takes place spontaneously, or is caused by incision, from the nodes of the plant, when it is three or four years of age. It is preferred in tears, when it is often mixed with the small stalks and the seeds of the plant. It is sometimes brought in larger masses, when little white shining particles are visible, which tinge spirit of wine with a golden hue. Lobel observes that it is very frequently adulterated, but this may easily be ascertained by the deficiency of odour and the want of the general characteristics. Its odour somewhat resembles that of turpentine. Triturated with water it forms a milky solution, but neither water, wine, vinegar nor alcohol completely dissolve it; proof spirit, however, acts upon it and completely dissolves it. It may be rubbed up with mucilage of gum arabic, with syrup of marsh mallow, or with the white of egg. It approaches in many of its qualities to gum ammoniac, but its striking characteristic is its smell. This is a very useful medicine for interruption of the menstrual excretion, and combined with the cathartic extract and the pills of aloes with myrrh, is one of the most valuable remedies we possess, if it, be persevered in for some time. There is a very good formula, but one which is not particularly agreeable to a delicate stomach, in our Pharmacopœia, under the name of pilula galbani composita,—it is made thus: —Take of galbanum an ounce, myrrh, sagapenum, of each half an ounce, assafœtida half an ounce, syrup a sufficient quantity; beat them together in an uniform mass; the dose of this is from ten to twenty grains, and you may conjoin this with great advantage with any of the formula for the aloetic pills.

You will occasionally find instances in which, from the occupations in which females are employed, they are not enabled to have recourse to very active remedies, and also it is sometimes necessary not to attack nature with too great vehemence. You will, under such circumstances, find that by administering, for a certain number of nights pills of this class, you will produce all the good effect that can be expected. About ten days before the proper period is expected, you should give a couple of these pills before your patient retires to rest; occasionally they may also be taken in the morning. They are very uncomfortable to the stomach as well as to the sense of smell and of taste, and you will often hear that they seem to lie at the bottom of the throat, a sensation very often produced by pills, although they are lodged in the stomach. Generally, after a short time a great deal of flatulence is evolved, after which, if there be any nervous sensation, relief is experienced. I have never heard of any bad effect, the result of a long-continued use of such pills; they generally succeed in exciting nature to the necessary excretion, though some time elapses. They are much to be preferred where the circulation is languid, than where there is any febrile rhthym in the pulse, where there is heat and dryness of the surface. In that lowness of spirits and melancholy which often attends chlorosis, this is a very serviceable remedy. In retention of the menstrual excretion in early life, it is not so often efficacious as in cases of interruption; but of course this must always depend upon the causes, which are diligently to be inquired into, always remembering that I have inculcated upon your minds that symptoms are not to be the leading guides till you have found what produced them. Externally galbanum has been employed as stimulant and suppurative, and a formula for a compound plaster composed of it, of the plaster of lead, of common turpentine, and of the resin of the spruce fir, exists. It is considered to be very useful as a remedy for corns, and mixed with vinegar is applied to corns; and, according to Sourdet, in the "L'Art de Soigner les Pieds," it is the most useful remedy that the chiropodist possesses for these troublesome affections.

RUTA GRAVEOLENS—COMMON RUE.

This is "the herb of grace" of our older authors, from its having been employed by the priests in small bunches to sprinkle the people with holy water, and the fair Ophelia says "we may call it herb of grace on Sundays." It was a very great favourite not only amongst the rural classes in ancient times, but physicians spoke most highly of it. Some affirmed that it was an antidote to all poison, that it checked every species of contagion, and that it put a stop to the ravages of the plague. Murray, of Gottingen, thinks it deserving the name of an alexipharmic, and dwells upon its power of putting a stop to gangrene when used as a cataplasm or as an epithema. Boerhaave exclaims, "What medicine can be more efficacious for promoting perspiration, for the cure of hysteric passion, and of epilepsies, and of expelling poisons?" The ancients

highly estimated it, and Hippocrates thought it possessed the power of resisting contagion and poison. Sternberg and Tornius have collected all the authorities in its favour, and they embrace some of the most distinguished names. Still, however, we place at the present day but little faith in its virtues, whether it is actually little serviceable, or whether it is from the facility with which it is obtained, and our preference to that which is with difficulty procured, I will not pretend to say, but certain it is that there are few who would expect to be enabled to arrest the progress of disease by this remedy, or to place much reliance upon it alone. It is a hardy evergreen shrub which has been cultivated from time immemorial in our gardens, but that which grows wild is much more acrid, and has a much more powerful odour than that which we rear. When fresh gathered it is very apt to excite a great deal of irritation and itching of the hands, and if at all rubbed upon the eyelids by accident is the source of great inflammation. It has a stimulating, warm, and bitter taste, and a strong peculiar odour. The leaves on distillation with water, yield a pungent volatile oil, on which the virtue of the plant depends; this is of a yellowish or brownish colour, of a less disagreeable odour, of a slightly acrid taste, and of little gravity. Dr. Anthony Todd Thomson has found a strong infusion of it exhibited per anum of great service in relieving the convulsions of infants, arising from flatulence and other intestinal irritation; but he observes it may inflame the mucous coat of the intestines, and should, therefore, be given with caution. It obtained some reputation in epilepsy, and in the dose of from one to two scruples of the dried leaves was often given. Its odour was at one time strongly recommended in hysteria, and more particularly where it was associated with obstruction of the menstrual excretion. In the diseases of females it was a very favourite remedy of Hippocrates. In our old Dispensatory it is recommended not to be taken in the form of the water, as prepared in the shops; but Quincy says "it may be eat alone fresh gathered, as many do with bread and butter, or made into a conserve." This good old plan of taking some of our indigenous plants has long been abandoned, but it at one time was the favourite mode of procedure. He further observes,—"It is of excellent service in all nervous cases, and particularly in such as arise from the womb; it deterges the glands, and by its viscidity, bridles those inordinate motions which frequently begin there, and affect the whole constitution."

RUBIA TINCTORUM, OR MADDER.

This has excited more attention from the facility with which it communicates its red colour to vegetable substances, and to animals that feed upon it, than from its medical virtues, although it has been employed by the ancient physicians, and from the earliest records of our science was considered to have great power in the cure of dysentery, of scrofula, and the diseases which are incidental to females; it, however, is not unworthy some share of our consideration in the different diseases in which it has been employed. This plant has been cultivated, with great assiduity, in Asia, in Holland, in Silesia, for the purpose of obtaining the colouring matter which it imparts to linens, to cotton, and to wool. Unsuccessful attempts have been made to bring it to perfection in this country; but, after a great deal of labour and of expense, it has been found that it is cheaper to import it than to grow it. Duhamel, Gleiditch, Marseille, and different individuals, have pointed out the best means of cultivating it in their own countries, and of increasing or of diminishing the brilliancy of the colour in dyeing, whilst Professor Pallas has described the art of dyeing, as followed by the Asiatics, to form the Turkish thread.

One of the most singular characteristics of this vegetable, and which, at one time, excited considerable expectation that benefit might arise from it, is its power of imparting a red colour to the bones of those animals that feed upon it. This had been observed, and had been mentioned, by Antonius Mizaldus, in a book which he published in the year 1566, at Liege, called "Memorabilium, Utilium ac Jucundorum Centuriæ Novem," in which he states that erythrodanum, commonly called rubia tinctorum, imbues the bones of sheep with a red and bloody colour, if they are fed upon it for some days. This, it seems, was forgotten, but was again made known from the accidental circumstance of an English gentleman, of the name of Belchier, during his dinner at the house of a dyer, observing that the bones of the pig that was served at the table were of a red colour. On inquiry, he found that the swine were fed upon bran boiled with an infusion of madder. This was considered worthy recording in the "Philosophical Transactions," and Duhamel entered upon some experiments, which are also related in those volumes, which still further confirmed the facts; for he found that three days use of the food was sufficient to give a red colour to the bones of animals, and if they gave up the use of madder their bones speedily recovered their whiteness. On the great value, in a physiological point of view, of this knowledge, I need not dwell; but these experiments, demonstrating the rapidity with which the substance of the bone is changed, led to a hope that, in many diseased states of bones, remedies might be applied. It is believed now, that there is an affinity between the phosphate of lime

and the colouring matter of madder. Hence that matter combines with the phosphate of lime, which always constitutes part of the food. The compound being deposited in the bones is supposed, by Dr. Thomas Thomson, to occasion the red colour. In Italy, Mattheus Bazanus; in France, Geoffroy, Fougeroux; in Germany, Ludwig, Loseck, and others, took up this subject, and various preparations exist in the University of Gottingen which were made, under the direction of Haller, of the bones of different animals, coloured by this plant. From these it would appear that the teeth, even, might be made of a delicate rose colour; it is not only the solids of the body that can be thus tinged, but the fluids, nay, even the perspiration, can be made of a rosy red. There are some other vegetables which possess this power, but they are not many. The plant is a native of Turkey, of the South of Europe, and of Africa; it flowers in the month of June; the root is perennial, composed of many long, thick, succulent fibres, almost as long as a man's little finger, its bark principally affording the scarlet tinge; the leaves are annual, five or six in a whorl, ovate, lanceolate, ciliate, rugged on the upper surface, with little recurved prickles on the edges, and keel stern prickly stems, herbaceous, annual, decumbent, widely-spreading; from the joints of the stalk come out the branches which sustain the flowers; they appear cut into four segments, resembling stars, of a yellowish-green colour. The best sort is cultivated at Schowen, in the island of Zealand, and a history of the manner of cultivating it, as detailed by some writers, is very interesting; and Mr. Miller has gone into the mode followed in this country, which, could it have been fully carried into execution, would have given employment to a number of hands from the time harvest is over till the spring of the following year, besides rendering us independent of foreign countries for this important article of the cotton manufacture. The best roots are about the thickness of a goose-quill, semi-transparent, of a reddish colour, and strong smell. The red colouring matter is soluble in alcohol, which, on evaporation, leaves a residuum of a deep-red. Various shades are obtained by the manufacturer by the addition of chalk, sugar of lead, nitre, alum, and other substances. An immense revenue is obtained from the importation of madder into this country.

As a remedy for jaundice, this root has obtained a high character, and the name of Sydenham has been often repeated as an authority for its use; and cases have been related in which undoubted powers have been shown. Sydenham only recommended it where it has followed in hysteric subjects upon colic, but he observes that this disease is generally spontaneously cured.

The powers of the rubia tinctorum, or madder, as an emmenagogue, have been, from an early period, the subject of great eulogium. Fernelius, Hoffmann, and others have very warmly praised it; but it is to Dr. Home the English practitioner is indebted for much information as to its value, and from his clinical experiments we have been led to its frequent use. His ordinary practice in interruption of the menstrual secretion was, at first, to give half a drachm of the drug, powdered; after two days, two scruples; and if, in the course of two or three days, no good effect resulted from its use, he increased the quantity to a drachm four times in the course of a day. Dr. Cullen tells us, that "he knew many practitioners who, after several ineffectual trials made with it, have entirely deserted its use. Hertz points out, however, the cases in which it is most likely to be serviceable; it is in those in which there is much debility, where the excretion has commenced, but there is not tone and strength of constitution to keep it up, where too much bloodletting has occurred; he preferred giving it in the tea like infusion, in which Marx and others coincide; this latter physician speaks very highly of it as a diuretic, and it has been known to produce much effect upon the kidneys; its power upon the adjacent parts is certainly very striking. It very often relieves, more than any remedy that we know, that sort of strain which is often complained of by coal-heavers, by porters, and by individuals who are in the habit of lifting great weights. In these cases, after having tried all manner of external applications, anodynes, stimulant strengthening, and having done everything that could be supposed to affect the muscular tissue, this root, administered in powder, has been most effectual. It likewise allays that severe pain to which, previous to the menstrual period, some females are subject, though it does not equal camphor in that respect, which generally acts better than anything else, if given in the form of powder. As an emmenagogue you will not find the rubia tinctorum at all serviceable, if it be given in highly plethoric persons, who have had the period interrupted in consequence of sudden cold, which is one of the most constant checks, or of anything which has quickly acted upon the extreme ends of the excreting vessels, but where from a want of due nourishment, from depressing passions, from general causes of debility, the retardation occurs; it is the indiscriminate application of a remedy which throws doubt upon its utility, and it is this which induced Murray, of Gottingen, when speaking of the discrepancy of opinion as to the value of this remedy, to exclaim "Tam difficile est, nubes, quæ veritatem in dijudicandis viribus medicamenum obvolvunt, dissipare."

SINAPSIS,—ALBA, NIGRA; MUSTARD,—WHITE AND BLACK.

The seeds of these two species of mustard differ in their botanical character, but their effects upon the animal economy are very similar, the plants are indigenous annuals, growing in our fields, and cultivated in our gardens; the black mustard is a taller plant than the white; the upper leaves of the black are narrow and pendant; the flowers are pale yellow and small; the pods small, quite smooth, pressed close to the stem, whilst in the white the flowers are yellow and large, the pods rough and hairy, and are spread on nearly horizontal stalks. The name sinapis, and evidently the same vegetable, occurs as well in the Greek botanical works, as in the classic authors of Rome. Our English word mustard is said to be derived from mustum ardens, in consequence of our originally making our preparation of mustard, as the French do at this day, from the must of new wines. When rubbed with very sharp vinegar, an effervescence is produced; if it be prepared with new milk for the table, as a condiment, it gives out more of its peculiar taste, and is likewise improved in its general appearance, but does not keep very long. Traces of sulphur have been observed in its roots, and when the mustard begins to change, it gives forth sulphuretted hydrogen. Of its peculiar odour and taste I need say nothing.

As a grateful stimulant mustard has some claims to our consideration; it imparts a moderate warmth to the stomach, excites the secreting vessels into action, and hence causes a quick imbibition after digestion. Murray says, from personal experience, that it excites hilarity, and that he always felt happier after using it; and this he ascribes to the carbonic acid which is extricated. He doubts whether it has rendered the memory more tenacious, which is a common opinion. Haller thinks its use predisposes the body to acute disease. It is, however, harmless in moderate quantities, and though champagne is a better mode of giving carbonic acid to the stomach when it is required, it has this property, and hence is particularly useful in some states to females.

By the old laws of Holland, the ships employed in the service of their country, were obliged to carry a certain quantity of mustard, which was supposed to exercise a specific power over scurvy; it appears that at the siege of Rochelle, the recovery of a vast number of individuals who suffered from the most frightful symptoms of scurvy, was attributed to the employment of this as a remedy; in some of the worst cases of the African cachexia it has according to Adair been very serviceable. The unbruised seeds have lately come very much into fashion, and have been used as a popular remedy; but in many instances the worst possible effects have followed upon their indiscriminate use. The people in this country, when they once take it into their heads that a remedy is good for something, fancy it must be good for everything, and swallow it without having the fear of physic and of death before their eyes; but it is right that they should know that ulceration of the coats of the stomach and bowels have been produced by it. A strong healthy man on one occasion, swallowed a large quantity of seeds steeped in gin; an inflammatory fever came on, and he was dead in three days. In another instance, inflammation of the bowels and death succeeded upon the lodging of these seeds in a portion of the cœcum; they kept up an unceasing irritation there; and sometimes after being kept a week in the bowels, occasioning acute suffering, they are evacuated without having undergone much change. Mead furnishes us with a very curious case of ovarian dropsy very singularly cured by this remedy, and told us, in the quaintest possible style. In paralysis of the tongue, it has been found very valuable. As an emmenagogue, the unbruised seeds have been swallowed in doses of half an ounce; four drachms boiled in a pint of milk, and the mixture then strained, and a fourth part of this as a dose has also been recommended; sometimes considerable nausea follows upon this treatment and oftentimes vomiting. When chlorosis, or amenorrhœa depends upon a faulty state of the digestive organs, more particularly of the stomach, evinced by an unnatural appetite, loathing for ordinary food, and a partiality for chalk, for ashes, and for indigestible substances, this is useful, more particularly if magnesia, rhubarb, or any gentle stomachical evacuant be given at the same time; but you will derive no benefit from it in other states productive of the absence of the excretion.

MYRRH.

The tree that furnishes this gum resin has been determined by Ehrenberg to be the balsamo dendron, and our College has taken his authority. It has been described by Nees Von Essenbeck, in his valuable work, to be a small tree, with a stunted trunk, from which Ehrenberg saw the myrrh collected; the juice exudes spontaneously, and concretes upon the bark, which is whitish gray. It is at first oily; it then concretes; it is at first yellowish white, then becomes golden; and at last, when perfectly dry, red. The tree is a native of Arabia Felix; its aromatic odour has been long prized, as well as its taste, and it has the power of materially increasing the action of the pulse when swallowed, a few grains being sufficient for this purpose; it is hence much used in various states of languid circulation, but becomes very injurious where inflammatory symptoms are present. It promotes the se-

cretions generally, and, as Quincy observes, "In diseases arising from inactivity, and is very serviceable in languid cases, those female disorders that proceed from a cold, mucous, sluggish indisposition of its humours, but its most celebrated virtues are as a great cleanser and strengthener of the womb; it promotes the menses, and indeed is good in all hysterical affections, either in pills, boluses, or tinctures." It is now very seldom prescribed alone, but is given in combination with other remedies, for it is believed by many only to promote the operation of other more active agents, for even in half-drachm doses it has not restored the excretion. Cartheuser has written a work, "De Eximiâ Myrrhæ virtute Medicâ," which has served as the basis on which has been founded most of the essays that have appeared.

A FEW REMARKS
ON
PYRMONT,
THE MOST ANCIENT AND CELEBRATED SPA OF NORTHERN GERMANY;
With a Chemico-Pneumatic Table of its Springs.

BY
DR. RICHARD HARNIER.
(Communicated in English by the Author.)

I.—*Locality and Enumeration of the Springs.*

PYRMONT, the capital of a small principality, united for more than two centuries to the domains of the sovereign Prince of Waldeck, is situated at about forty English miles from Hanover, at fifty from Hesse Cassel, and at a hundred from Cologne, in a fertile and smiling valley, which, embellished by the small and gentle Emmer river, is surrounded by a range of undulating wooded hills, and protected by them from the cutting blasts of the north and east. Thus its climate is very temperate and healthy, whilst the rich vegetation of the soil, and the variety of its spots and views, answer equally to the pretensions of the peasant as to the pleasures of the promenade.

Moreover, the industry of the inhabitants, as well as the care of the Government, strive to satisfy all reasonable wants and wishes* of such people as come there for the improvement of their health, or for the two-fold enjoyment, as they may like the one or the other, of rural tranquillity, or of animated intercourse with strangers. Concerning the latter scope, there is abundant provision for playing, dancing, and concert-rooms, not to forget a very pretty theatre, and its daily performances, from the beginning of July almost till the end of August, that is to say, during that crowded period of the season which usually is also enlivened by the presence of the reigning family, and its kindness towards the foreigners.

In adopting the definition, according to which "mineral waters are such as contain a proportion of medicinal substances sufficiently great to exert on the animal economy a particular influence, dependent on the nature and share of the said substances," it appears that Pyrmont is in possession of a rich variety of *cold* springs; there are none higher than 57° Fahrenheit, or 20° Reaumur. And with regard to the specific classification which, founded on the peculiar difference of the respective chemical ingredients, distinguishes the four classes of *acidulous*, *sulphureous*, *muriatic*, and *chalybeate* waters, it is only on the two last, but particularly on the chalybeate, that the fame of Pyrmont rests; for hitherto no sulphureous source has been discovered, while a single acidulous one (Saüerling) does not present a chemical or medicinal character sufficiently powerful to be mentioned here in any other way than as a very refreshing and agreeable beverage.

There are reckoned at Pyrmont five different *chalybeate springs*, commonly distinguished by the names of the *principal* or *drinking spring*, the *bathing spring*, the *ancient bathing spring*, the *spring for the eyes*, and the *new spring*. Although they are generally homogeneous, and, at least, the former four, at a small local distance from each other, still these springs present some proportional differences, as will be found noticed in the subjoined table.

The principal, or *drinking spring*, anciently called the holy, is undoubtedly that which has given to Pyrmont its first existence; for it has for centuries annually attracted a crowd of sick people from the neighbourhood as well as from distant countries, and furnishes moreover that remarkable quantity of water exported every year to all parts of Europe, and to the most remote regions.* And at this time no other mineral spring is known which is richer than this is in carbonic acid gas.

The *bathing spring*, anciently called the boiling (Brodelbrunnen), on account of the noise of its gaseous bubbling, gushes with such force as to carry along with it even some hydro-oxide of iron towards the surface, which, when the weather is calm, finds itself usually covered with a gaseous stratum, from 14 to 18 inches high, a hundred cubic inches of which contain about forty

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* Besides the *great lodging-house*, which, like some smaller inns of the borough, offers a first abode, as well as the choice of staying there, the stranger finds in almost every house rooms and apartments of all descriptions and prices.

* It bursts forth in a volume of about twenty-two pounds a minute.

cubic inches of carbonic acid gas.* So peculiarly copious is this spring, that it furnishes two hundred and twenty-seven cubic feet an hour, equivalent to two hundred and forty pounds a minute, and all this volume of water is conducted by subterranean pipes and by the natural declivity of the soil towards the *bathing-house*,† so as to lose nothing of its chemical and gaseous contents by any intermediate mode of mechanical or manual transport.

The *ancient bathing spring*, somewhat inferior to the two former in carbonic acid gas, may be mentioned only as a useful supply for the reservoir of the bathing-house, when a particular frequency of visitors should render it desirable.

The *spring for the eyes* (Augenbrunnen), is commonly applied to them, on the very spot of its gushing, as a strengthening fomentation, or lotion, for the symptoms of such a weakness and relaxation as sometimes affects that whole organ, or more particularly its exterior muscles and membranes, and even produces, in a more advanced period of life, a disfiguring sort of chronic blennorrhea.

The *new spring*, so called from having early in the year 1825 received a new enclosure, which defends it against the inundation of the adjacent rivulet, distinguishes itself from the principal drinking spring by a much more considerable quota of carbonate of magnesia and sulphate of soda, and by the total absence of sulphate of lime, so as to produce by its internal use more opening, and thereby less exciting effects. But, distant about three thousand feet from the central establishment, it still wants such a building as would protect the visitors from momentary atmospheric changes, and enable them to drink at the very spring; for, when its water is kept and transported in bottles, it seems to let quickly escape a part of its gas, and lose its limpidness as well as its agreeably prickling taste.

Yet its overflowing is, by means of subterranean pipes, directed to the muriatic baths, and mixed with their water in every different proportion, which may be fit for individually preparing, in some cases, the transition from the muriatic to the chalybeate baths.

The *muriatic springs* of Pyrmont are found at the distance of less than an English mile from the chalybeates, close to the small river which traverses and adorns the valley. There are three principal ones, the *drinking*, the *bathing*, and the *saline* spring.

The *muriatic drinking* spring, raised hardly half a foot above the mean height of the Emmer, furnishes about a hundred and thirty pounds an hour, and betrays, by a continual disengagement of gaseous bubbles, that quantity of carbonic acid gas which essentially distinguishes this water from the common muriatic sources, to be found so frequent in Germany. A sufficient quantity of it, recently bottled off, is always to be found ready by the side of the principal spring at Pyrmont, to be offered to its numerous drinkers; for, notwithstanding some distance of transport or time, it preserves perfectly its clearness and other original qualities, which have recently brought it into much request for foreign countries.

The *muriatic bathing spring* is assigned and conducted to a particular bathing-house, which contains thirteen separate baths, and also the necessary engines for douches; moreover these baths are sometimes strengthened, according to the wants of the patient, by the addition of any prescribed quantity either of the new spring, or of the sediment,* which remains in the salt-pans, from the coction and crystallisation of the salt, while a sufficient number of carriages are always at hand during the season to convey the bathers, at a very moderate price.

The third muriatic spring, anciently appropriated as *saline*, to the sole preparation of salt, furnishes four cubic feet and a half a minute, and contributes, too, essentially by its supply, when wanted during the height of the season, to the advantage of the bathing establishment, to be passed over here in silence.

II.—*Medicinal Powers of the Chalybeate Springs.*

Notwithstanding some specious arguments invented in favour of mineral waters naturally poor in chemical ingredients, it appears to be proved by experience, that the efficacy of such springs, particularly the cold ones (because the hot springs may sometimes, for their effects, depend on the very different degrees of their intrinsic warmth), is generally in just proportion to their chemical and pneumatic qualities, and

* Within a few years a neat closet has been erected over the very surface of this bathing-well, so as to keep its gaseous evaporation concentrated for gaseous half-baths and local douches, to be applied to inveterate rheumatic or gouty pains and stiffnesses, to certain anomalies of the uterine system, and to some imperfections of the organs of sight and hearing.

† This building contains thirty-eight baths in as many separate closets, and possesses also different sorts of douches, more or less strong and varied, as well as even the necessary appliances for vapour baths.

* The efficacy of this residue appears partly to be explained by the result of the recent analysis of a similar one by Messrs. Balart and Dumas, who state to have found therein chlorure of iodine, as Mr. Krueger had previously done at Rostock.

that the specific difference which predominates in them furnishes the physician with a preliminary view of the particular effects, to be expected from such or such a mineral water. Thus, for instance, to mention only the most striking examples, those of Ems and Setters, of Carlsbad and Marienbad, of Aix-la-Chapelle and Nendorf, of Wisbaden, and some muriatic sources; finally, those of Pyrmont and Spa are proofs of what is advanced, by respectively acting on the organs of respiration, on the liver and the kidneys, on the cutaneous system, on that of the lymphatic vessels, and on that of the nerves and the blood. This action, owing to the combination of soda and carbonic acid gas in the first, of soda and sulphuric acid in the second, of sulphates and sulphuretted hydrogen gas in the third, to the muriates in the fourth of the above-named, and lastly, to the carbonised iron and carbonic acid gas in the chalybeate, is so distinct, that it will seldom be permitted to substitute, at least for internal use, the one for the other without frustrating the hopes of the patient.

The author says "internal use," because notwithstanding a sort of fundamental analogy naturally exists between the respective effects, internal and external, this analogy is necessarily modified by the essential difference between the assimilative interior organs and those of the skin, which are generally rather excretory. It is thus that a patient suffering from psoric dyscrasies, or from rheumatism, can derive advantage from the sulphureous or muriatic baths, although he could not well bear the internal action of sulphuretted hydrogen gas, or of the muriates, sometimes adverse to the stomach and to the digestive functions; thus, also, carbonic acid gas and iron united are incontestably recognised as a *calming* tonic in the form of baths,* while this epithet by no means agrees with the results of their internal use.

However, the general effects of our chalybeates answer perfectly to the particular qualities of the ingredients which predominate in their natural composition.

To begin with that in which they are the most rich in comparison with others of the same sort, viz., with the *carbonic acid gas*, this, in the first place, gives them their peculiarly refreshing taste, while at the same time it seems by this mineral combination to animate the vegetative functions in the most penetrating manner, and evidently calms sometimes spasmodic dispositions of the stomach. It exercises a slightly enlivening influence on the brain itself, and thereby on the action of the nerves, on which depends ultimately the regular and energetic course of all the organic powers; it is likewise considered to communicate a specific vigour to the relaxed activity of the loins and of their secretions, so important for purifying the humours from distressing acrimonies.

With respect to the *iron*, ever acknowledged as one of the most remarkable tonics, it is much better borne by the stomach in this perfectly dissolved and diluted state than in any possible preparation of pharmacy; amalgamating in this way entirely with the organisation, it contributes, notwithstanding the insignificance of its relative quantity, to the direct and rapid improvement of the blood, when impoverished of its colouring matter, and conduces thereby to restore the energy of the circulation and of the whole reproductive system.

Thirdly, the *salts*, which form part of the contents of these waters, control in some degree the united action of the gas and iron, by supporting the regularity of the actions of the lower belly, so as to prevent in that way the possible excess of excitement and arterial irritation, insomuch as,

Fourthly, the *water* alone, the common menstruum of all the other ingredients, cannot suffice for this end in itself, either by its freshness or the quantity taken. For, it is only in cases of peculiar disposition on the part of the patient, or of his far exceeding the proper quantity to be drunk, that our chalybeates will exert an action directly purgative, an action, however, easily supplied, when momentarily required, by the most simple means of pharmacy, or by some glasses of the muriatic drinking spring, taken in the afternoon.

Whereas, then, the composition and the contents of the genuine Pyrmont wells give them the best founded claims to the title of very efficacious, salutary springs; they must by this same reason not be classed with that sort of innocent mineral waters which are deemed applicable to the most different diseases, and sometimes owe a certain reputation to the very circumstance of their negative qualities. Our chalybeates are materially and essentially strengthening, and as far as, in the presence of the immense variety of individual constitutions and their respective sufferings, certain prohibitive limits may possibly be marked out for such or such mode of treatment, it appears clearly proved by the results the best confirmed by experience and otherwise perfectly coinciding with theory, that the chalybeate waters

1st,—Do not at all suit real plethoric constitutions of any age, in which the energy of the arterial system, joined to a fibre more or less dry and hard, can so easily turn into an inflammatory disposition.

2nd,—That they must thus become pernicious to that numerous class, particularly of younger people, who suffer from a tendency to the specific complaints of the chest.

3rd,—That the use of the chalybeate baths commonly increases the most striking symp-

* The arterial pulsations usually diminish in number during the bath.

toms of dropsy when completely formed, although the beginnings of this complaint are sometimes successfully combatted by the chalybeate drinking springs, as long as there is no apparent swelling of the liver or the spleen.

4th,—That, lastly, these waters are inconvenient, on account of the danger of increasing erethism, for such sorts of gout and stone, or gravel, as are accompanied by acute pains and inflammatory symptoms.

But if chalybeates, as strong as those of Pyrmont, will not bear to be applied to any acute or feverish disposition, nor indiscriminately agree with many other valetudinary cases and specific maladies, yet they are, on the other hand, of infinite efficacy against a numerous tribe of general and partial infirmities. They are perfectly fit—

First. For strengthening constitutions originally weak or weakened by perverse education, by prolonged physical or moral sufferings, by too long sojourning in hot or otherwise unhealthy climates.

Second. For restoring such men as find themselves exhausted and broken by sexual excesses, or by ensuing mercurial treatments.

Third. For invigorating young ladies, who by their retarded development are threatened with chlorotic or even leucophlegmatic symptoms, as well as such other women who by confinements succeeding each other too rapidly, or by repeated miscarriages, by too copious monthly courses, or leucorrhœa, have lost the due freshness and energy of health.

Fourth. For particularly improving and reanimating both the hysterical and hypochondriac invalids; that is to say, the wretched existence of that numerous class of nervous sufferers, who, without sometimes having to complain of any specific pain or malady, find themselves continually harassed and frightened into despondency by a wandering variety of distressing and vexing sensations.

Fifth. For preventing, by their exciting influence on the arterial system and the circulation, such chronic complaints and diseases, as could be produced by the excess of those congestive venous stagnations, which in their beginning betray themselves by what are called hæmorrhoidal symptoms.

Sixth. For relieving incipient paralysis, as well of the exterior moving organs as of some interior ones, such as the stomach, the intestinal tube and the bladder, in as much as they derive from atony of the nerves and muscles.

To sum up all the medical indications and salutary effects of our chalybeates, the author may be allowed to apply to them the ingenious system,* according to which the whole of the valetudinary dispositions and complaints of the human frame are classed under six different respective constitutions, viz., the cerebral, the spinal or medullary, the ganglio-nervous, the arterial, the venous, and the lymphatic constitution. Thus would result that the chalybeate waters:—

First. Perfectly agree with the lymphatic and venous constitutions, the first of which failing by the imperfect preparation, the second by the too languid and unequal circulation of the blood.

Second. That they are fit for correcting the ganglio-nervous constitution, this abundant source of obstinate and sometimes almost inexplicable perverse sensations, which equally torment the body and the mind.

Third. That they will also become useful to the medullary or spinal constitution, when its anomalous tendencies have arrived at that second period, wherein erethism, whether inflammatory or nervous, has already given place to the torpor of exhaustion and to the precursive symptoms of paralysis.

Fourth. That they are decidedly repugnant to the arterial and cerebral constitutions, the first of which predominates in the flower of age, while the other, attaching itself first to infancy, returns at the period of decline.

It is not without regret that the author feels himself obliged modestly to abstain here from all further details on the specific applications of the chalybeates, for being permitted to dedicate some pages more, as completing this rapid sketch, to the muriatic springs of Pyrmont.

(To be concluded in our next Number.)

* F. A. B. Puchett, "On the Individual Constitution, and its Influence on the Origin and the Character of Diseases." Leipzig, Brockhaus.

EXTRA-UTERINE FŒTATION. GASTROTOMY.—CURE.

On the 15th of September, 1837, Dr. Zwanck, of Hamburgh, was called on to attend a female, who had experienced labour pains for the last three days; on examination he discovered an extra-uterine pregnancy. Gastrotomy was performed on the following day; an incision, five inches in length, was made along the linea alba, and the chorion exposed, which presented a tendinous appearance; the membranes were now divided, and the fœtus brought into view, but the incision was found to be too small to admit of its extraction; the opening of the abdominal parietes was, therefore, enlarged by half an inch, when the fœtus was removed without difficulty; in a few moments more the placenta presented between the edges of the wound, and was also extracted. The wound was united by five sutures, and after a lapse of three weeks the woman was perfectly well. The child also survived, and at the time of the publication of this case was a strong, healthy boy.—*Caspar's Woch. and Archives de Med.*, June, 1838.

THE LANCET.

London, Saturday, September 1, 1838.

THE extract from the *Report of the Select Committee of the House of Commons*, and the elaborate *Report of the Council of the British Medical Association*, present a general view of the progress and termination of the Poor-Law Medical Inquiry,—indisputably one of the most important questions that occupied the attention of the House of Commons during the past session. We say this advisedly; and few will dispute the fact, when they are aware that the medical returns show that *one-fifth* of the people of England die under the care of the union surgeons; that 2000 medical officers are employed at present; and that twice that number are required to administer medical relief efficiently. Moreover, the tenders, the insults, the animosities generated, the sufferings directly and incidentally entailed upon the poor, affected the entire body of practitioners, as no one possessing the least humanity, or the smallest regard for the honour of his profession, could look on these results with indifference.

It will be recollected that the Committee were decidedly in favour of the Poor-Law Amendment Act; and that, in this respect, they represented the opinions of a great majority of both Houses of the Legislature. Differing, as the Editor of this Journal did, from the Committee on the principle of that measure, we have great pleasure in avowing our entire concurrence in the sentiment of the President of the British Medical Association, that "the thanks of the profession "are due to the Committee for the very "courteous manner in which they examined "all the witnesses, and especially for the "kindness, the patient attention, and the "great interest which the Chairman showed "throughout the inquiry."

It will be seen that on several points the Report of the Committee is favourable to the plan urged on their attention by the medical witnesses: it is freely admitted that the size of the districts should be reduced,—that the tender system should be abolished,—and that the remuneration should be such as to insure proper attention and the best medicines. All these are important practical points.

In making the recommendations the Committee, we are convinced, was sincerely desirous that they should be literally carried into effect; it had no intention to deceive the sick poor in this matter, or to pay the medical profession with words. And, from the conciliatory tenor of Dr. KAY'S evidence, it may be inferred that the Poor-Law Commissioners are disposed to adjust the question of medical remuneration satisfactorily. Dr. KAY admitted that salaries equivalent to *6s. 6d.* per case, would not be unreasonable. This sum, it was found from various sources specified in the evidence, would furnish drugs and the ordinary medical appliances, exclusive of trusses, leaving a small surplus for advice and attendance. It would amount to nearly double the present miserable stipends.

The only portion of the plan which the Committee refused to sanction, was the machinery for carrying it into effect; they "could not concur in the suggestions for the "appointment of a Medical Commissioner "by the Crown, and of Assessors by the "Boards of Guardians and the resident "medical practitioners." This conclusion is much to be regretted; but the reasons on which the recommendation was resisted are assigned in the Report, and we shall endeavour to show that they are unsatisfactory and ill-founded, as we have sufficient confidence in the candour of the members of the Committee to believe that if this be done, they will not adhere to an opinion somewhat precipitately expressed. The grounds on which the Committee resisted the recommendation, are thus announced:—

"The same considerations which govern private individuals in the selection of medical attendants for themselves and their families will, it is hoped, influence Boards of Guardians in selecting attendants for the poor: the same individuals, in the great

majority of instances, will attend the poor in common with the other inhabitants of the district; and in this respect no class of the population will be exposed to any comparative disadvantage."

It has unfortunately happened, hitherto, that Boards of Guardians have not selected medical attendants for the poor, on the considerations which influence private individuals in taking a similar step: they have not done for the poor what they do for themselves: they have never, so far as we have heard, placed their own lives at the mercy of the lowest bidder, by a tender; they have never advertised all over the kingdom for ignorant adventurers — for MERRICKS and WARDS—to practise upon the health of their children or parents; they have never, to save a few shillings, defrauded themselves of efficient remedies and adequate care in sickness, though they have done all these things in dealing with the sick poor. But we do not wish to dwell upon this disagreeable subject: it will be more gratifying to believe with the Committee that the Boards have erred only "by way of experiment," and that in future they will adhere to the simple rule of Christian morality, in selecting medical officers for the sick, "Do unto others as ye would they should do unto you." It was not proposed in the plan submitted to the Committee that the right of *electing* the medical officers should be taken from the Guardians; but it was proposed that the terms of remuneration should be fixed before the election, and adjusted to any change of circumstances, annually, by a Medical Assessor, in conjunction with an Assessor named by the Board of Guardians. The Poor-Law Commissioners have at present the supervision of the medical officers. In cases of real or imaginary misbehaviour, they have the power of dismissing any medical officer in any part of the kingdom; they have exercised that power in several instances injudiciously and injuriously, not, it may easily be believed, from bad motives, but from ignorance of the questions brought under their cognizance. Was it unreasonable, then, to ask that this power should be confided to a Commissioner who had received a medical education, who was well acquainted with the subject, and was publicly responsible for his acts? Recollect that the question is not whether the supervision shall exist, or whether the power of removing 2000 medical officers shall continue, but whether the supervision and power shall be exercised by ignorant or by Medical Commissioners. The Committee, in another part of the Report, recommend the continuance of the three Commissioners, in the plenitude of their authority: they "believe the powers of the "*Central Board* to be indispensable to the "execution of the law; and that without "some control of this kind there could be "no security against a recurrence to almost "every variety of mismanagement or abuse." They believe that the Guardians are not able to decide upon the propriety of giving or withholding bread—that they know not enough of the circumstances of the poor and the rate-payers—that they are incapable of transacting the ordinary business of life, and carrying into effect the general provisions of the Poor-Law Amendment Act,—but that they are, nevertheless, adequate judges, in conjunction with the non-medical Commissioners, of the results of medical attendance, and skilful or unskilful practice! The inconsistency is flagrant.

Mr. CHADWICK examined the medical officer of St. Alban's, on the occasion of the death of an unfortunate small-pox patient, and had the candour to publish the examination to the world. He was evidently proud of this judicial display; and, his proceedings being taken as a specimen of the mode in which medical questions and medical character are dealt with by the Central Board, we ask, can anything be more pitiful, or, rather, more appalling? Mr. CHADWICK is the reputed father of the new parochial system (with the exception of the bastardy clause, which has been laid at the door of the BISHOP OF LONDON); but on what ground does he pretend to decide questions in medical practice, or to play the medical examiner and judge? Can Mr.

Chadwick play the fiddle, the trombone, or the Russian horn? Does he pretend to rival Paganini, to walk the stage with Coulon, or jump through a hoop like Ducrow? If he pretend to excel in none of these accomplishments, how can he, and how could the Commissioners, play the doctor on any difficult question that may arise among 2000 medical officers?

Navem agere ignarus navis timet: ARROTONUM aegro *
Non audet, nisi qui didicit, dare; quod medicorum est,
Promittunt medici: tractant fabrilia fabri.

We shall anxiously watch the steps which the Commissioners may take before the next session of Parliament to remedy the abuses of the present system, to reduce the size of the districts, to raise the rate of remuneration throughout the country, and to give practical effect to the recommendations of the Committee. They will require all the assistance of the medical officers in accomplishing these important objects. Every effort should be immediately made to dissipate the illusions formerly propagated by the Assistant-Commissioners, particularly on the question of remuneration. The cost price of the remedies, the relation of this to the salaries, and the facts adduced in the medical evidence, or any other facts likely to lead to just notions, should be impressed in every way upon the rate-payers, the poor, and the Guardians.

And here we cannot avoid calling the attention of the younger medical officers to a mental illusion which has led to many of the low tenders under the present system. Money appears to the mind to be more considerable in one sum than when subdivided into innumerable small sums, although the amount may be the same. A large sum received at several times makes less impression than when given at once; hence the sagacious Lord Chesterfield's advice to his son, never to give small sums to servants, but larger boons at longer intervals; give a man half-a-crown, and you are a gentleman; give him sixpence five times and you are a shabby fellow. Hence, also, the proverb,—"Take care of the pence," &c., for while pounds are not exchanged so often, pence and shillings are paid hundreds of times in the year, and, going away in small portions, the total amount is liable to escape notice. A hundred a year will look a good round sum, temptingly offered by a Board of Guardians in the newspaper, to a medical student just escaped from his examinations. The cost of drugs, a horse, and other incidental expenses dissipated in small sums, will appear inconsiderable in perspective; yet a hundred pounds would not supply each of 66 patients with medicines the year through worth *a penny a day*. The expenses of his establishment, and his druggist's bill, would, perhaps, remind the neophyte of this before many years elapse; but the mischief would then be accomplished. Let the young practitioner also reflect, that by serving the Guardians on excessively low terms, when attending the pauper, he depreciates the value of medical labour. If he furnish John, and John's wife, and John's children, with medicines and efficient advice for five or six shillings a year, John's master will begin to inquire if the price of draughts, and pills, and potions, and journeys, cannot be reduced by competition. But the ardent, incipient surgeon is indifferent about getting money or deriving any direct advantage from the Union; he views it only as an easy introduction to practice. Still let him recollect that the way which has been made so easy to him will be equally easy to others. He got into practice by attending the Union paupers for £10 less than the medical man who was previously settled in the neighbourhood, and he has no sooner realised a few hundreds a year than another gentleman offers to take £12 less than the original salary, and gets into the same field on about the same terms. Adventurer follows adventurer, and the Union at last swarms with

* This clause scarcely holds in England now. Pope licentiously translated the passage:—

He served a 'prenticeship, who sets up shop.
Ward tried on puppies, and the poor, his drop;
Even Radcliff's doctors travel first to France,
Nor dare to practise till they've learned to dance, &c. &c.

hungry practitioners. The pernicious system reduces all to the verge of insolvency, and if fever or accident arrest their career, what prospect has the forsaken family? By reflecting on facts of this nature, and resolutely fulfilling their duties, the Union surgeons may materially *assist* the Poor-Law Commissioners in carrying into effect the recommendations of the Parliamentary Committee.

The practitioners of each Union should meet before the contracts are entered upon in the next year, and appoint one of their body to fix the salary with the Guardians, on the basis laid down in the Parliamentary Evidence.

"ANIMAL MAGNETISM"; or, "MESMERISM."

EXPERIMENTS

PERFORMED ON

ELIZABETH AND JANE O'KEY,

AT THE HOUSE OF

MR. WAKLEY, BEDFORD-SQUARE,

in August, 1838.

At the wish of several professional gentlemen who had witnessed many of the experiments which had from time to time been performed on Elizabeth and Jane O'Key by Dr. Elliotson, with a view to prove the influence of mesmerism on the human frame, an appointment was made for the attendance of the girls at the house of Mr. Wakley, in Bedford-square, on an early day in the month of August, when Dr. Elliotson exhibited several of the results which he considered to arise from magnetic manipulations and processes. On this occasion the experiments were conducted wholly by Dr. Elliotson, and regarded by Mr. Wakley not as tests of the reality of the phenomena displayed, but as demonstrations of the supposed discoveries and the real opinions of the Doctor. Accordingly, a fresh appointment was made for Thursday, August 9th, when the experiments were again commenced and conducted by Dr. Elliotson, and a second time rejected by Mr. Wakley as evidence of the correctness of the views entertained by the advocates of mesmerism.

After some days had elapsed, Dr. Elliotson addressed a note to Mr. Wakley saying that he would send the girls again to the house of Mr. W. at 3 o'clock on Thursday the 16th of August. Dr. Elliotson's note not reaching Mr. Wakley until 12 o'clock on that day, Mr. W. had not invited any persons to witness the experiments, but Dr. Elliotson had asked Baron Dupotet, Dr. Richardson, Mr. Herring, and Mr. Clarke, to be present, and these gentlemen, with Mr. Wakley, and Mr. G. Mills (who had drawn up all the accounts of the various experiments performed by Dr. Elliotson at University College Hospital which had appeared in this journal), formed the spectators on this occasion.

Experiments on Elizabeth O'Key.

After some of the often-repeated experiments had been performed by Dr. Elliotson, with various results, it was proposed by the Doctor that the metal, *nickel*, should be used, the effects of which he said had been found by him to be, and would now prove to be, quite astounding. A piece of nickel, was produced by the Doctor, of about three quarters of an ounce in weight, and of an oval form, and also a piece of lead, of nearly the same shape and smoothness, but somewhat larger. Elizabeth O'Key was then seated in a chair, being, as was stated, in the "ecstatic delirium." A piece of thick pasteboard was placed in front of her face, and held in that situation by two of the spectators. By this contrivance it was rendered impossible that she could see what was passing either below or in front of her. Mr. Wakley being seated directly opposite to the girl, and at a short distance from her, received the lead and nickel from Dr. Elliotson, in order that he might rub the two on her hands in such a manner that from merely touching the substance, or from its form, it would be impossible for her to decide which of the two was being used. Dr. Elliotson had, as has been stated, previously described the effect of the magnetic nickel to be of a most extraordinary character, and said at the same time, with much earnestness, that the lead might always be applied with impunity, as no magnetic effect ever resulted from the application of that metal to the skin.

The substances were then applied to the hands of the girl. First the lead was applied to each hand, alternately, but in a manner which might have led the girl to believe that both metals were used. No effect whatever resulted from these applications.

After the expiration of a considerable period, the nickel was employed, having been received from Dr. Elliotson, who for some time had held it in his hand in order to charge it strongly with the magnetic influence. By this proceeding the metal was necessarily heated to the temperature of the skin. Mr. Wakley had previously thought it right to hold the *lead* in *his* hand, and heat it in a similar manner. In consequence of this obviously necessary precaution, no indication was offered to the mind of the girl by which it could be guided, during the experiment, by the mere *temperature* of the substances which were employed.

The nickel was now used, precisely as the lead had been applied. There was a pause. The expected results did not appear. After, probably, a minute had elapsed, the lead was again used; and then again; and after the last application of the nickel, the lead having been repeatedly employed during the interval, the face of the patient became violently flushed, the eyes were convulsed into a startling squint, she fell back in the chair, her breathing was hurried, her limbs were rigid, and her back and abdomen assumed the position which are produced in an attack of opisthotonos. In this state she remained during nearly a quarter of an hour. Certainly that time elapsed before the condition of the patient appeared to warrant a repetition of the experiment. A short conversation then ensued between Dr. Elliotson and Mr. Wakley, as to the cause and reality of the symptoms. The Doctor contended that the effects clearly resulted from the application of the magnetised nickel, but that they had not come on with their usual rapidity. Mr. Wakley expressed a contrary opinion, and wanted to know of what value the experiments could be if there were nothing like *certainty* in the results, and if the effects were to be attributed to one metal so long after another had been employed, as on that occasion. Ultimately it was determined that another experiment should be tried with the nickel, Dr. Elliotson suggesting that that metal, in its magnetised state, should alone be employed.

Mr. Wakley was now again the operator, and before the experiment was tried he stated, privately, to Mr. Clarke, that instead of using nickel only, he would not on this occasion employ any nickel, and desired Mr. Clarke to take notice of the fact, that he would put aside the nickel, unperceived by any other person, the moment that it should be handed to him by Dr. Elliotson, and before either of his (Mr. W's.) hands should be allowed to come in contact with those of the patient. The experiment was then again performed. Mr. Wakley had taken the nickel from Dr. Elliotson, and put it on one side, when it was taken, unseen by any other person, by Mr. Clark, who placed it in his waistcoat pocket, and walked with it to the window, there remaining during the performance of the experiment. Mr. Wakley employed both hands, but his fingers were so held that it was impossible for any person excepting the operator to know *what* he was holding. Presently, on applying the substance which he held in his left hand to the right hand of the patient, the pasteboard being again held before the eyes of the girl, Mr. Herring, who was standing near, said, with much sincerity of feeling, in a whisper, but loud enough to be heard at a short distance, "Take care; don't apply the nickel too strongly." Scarcely had these words escaped from his lips, when the face of the girl again became violently red; her eyes were fixed with an intense squint, she fell back in the chair, a more evident distortion of the body ensued than in the previous paroxysm, the contractions of the voluntary muscles were more strongly marked, producing a striking rigidity of the frame and limbs, and the shoulders were thrown back to the utmost, the spine displaying as complete a bow as in an attack of opisthotonos. In a word, the severity of all the symptoms appeared to have undergone marked increase. Dr. Elliotson again observed that "no metal other than *nickel* had ever produced these effects; that they were most extraordinary;" in fact, that "they presented a beautiful series of phenomena." This paroxysm lasted during upwards of half an hour, and was admitted by all who were present to be much more violent than the one which had preceded it.

Mr. Wakley now suggested that the girl should retire into an adjoining room, where her sister was waiting, as he was anxious to make a statement to Dr. Elliotson in her absence. The girl objected to depart, and therefore her sister was called from the adjoining room, and the gentlemen retired into that room. Mr. Wakley then said to Dr. Elliotson, "that he felt it to be his duty to state that the Doctor was entirely deceived

respecting the character of the experiments and the cause of the symptoms. That all present had been witnesses of the violent effects which appeared to result from the application of the nickel to the hand, and had heard Dr. Elliotson state that such extraordinary symptoms could be produced by no other magnetised metal, whereas he had *not used* NICKEL *on that occasion*. He had *not even approached her with it*; but that on the instant that it was handed to him by Dr. Elliotson he had put it aside, unobserved, and had merely rubbed upon the skin of the girl a piece of lead and a farthing, which he had respectively held in either hand, but that the metals were so held that he was certain that no person could discover what he was applying."

Dr. Elliotson replied, that "he saw the nickel used; that Mr. W. must have touched her with that metal without knowing it himself; that he was certain of the fact, and that he was positive that the effect could be produced in no other way."

Mr. Wakley then said that there was a gentleman present who could confirm the accuracy of his statement,—a witness, in fact, who had the nickel at that moment in his pocket, and had stood with it at the window during the whole of the time that he was applying the lead and the farthing to the hands of the girl.

Dr. Elliotson again declared that this was impossible, when Mr. Clarke produced from his pocket the piece of nickel, and said that it had really been there during the whole of the experiment, and that it had not been near the girl during the entire trial.

After a somewhat lengthened conversation Dr. Elliotson suggested that the experiment with the nickel should be tried once more. This proposition was consented to; and during the performance of the experiment Dr. Elliotson remained in the other room, while Mr. Wakley, Mr. Herring, and Mr. Clarke, went to the patient to renew the operation. Again was the nickel handed privately to Mr. Clarke, and the lead and farthing were applied as before, with the pasteboard held in front of the patient's face. In three or four minutes there was a re-appearance of the flushed countenance, the staring eyes, the rigid limbs, the bent back, and the distorted frame, although *no nickel had been used*,—nothing, in short, but the lead and the farthing.

A report of these results was conveyed to Dr. Elliotson and the gentlemen who had remained with him, when Dr. Elliotson said that the occurrence was most extraordinary; that he could not at that moment account for it; and that he had no doubt that an explanation could soon be found which would remove all appearance of anomaly in the results. He would, he said, again suggest that the nickel should be re-employed; and as this request was so urgently made, Mr. Herring, Mr. Wakley, and Mr. Clarke, again visited O'Key, for the purpose of proceeding with the trial, but, *instead of using the nickel*, the lead and farthing were *again* employed, with the *same results as before*. There was another fit. Afterwards, when the girl had recovered from the apparent paroxysm, Mr. Wakley suggested that the magnetised nickel should be rubbed over both hands freely, on the skin, in different places, but not exactly in the manner in which the lead and farthing had been employed. *No effect was produced by this application of the nickel*.

On hearing a further report of the effects which appeared to arise from the use of the lead and the farthing, and the *absence* of effects when the nickel was really used, after the other experiments had been concluded, Dr. Elliotson candidly admitted that he "could not explain how the thing had occurred; it was most extraordinary, but still he had not the slightest doubt that the whole would yet admit of a satisfactory explanation."

Mr. Wakley, on the other hand, contended that what had been done was, in his opinion, perfectly conclusive with reference to the character of the supposed phenomena, and that he did not consider that a single additional experiment could ever be necessary in connection with such an inquiry.

Afterwards it was proposed by Dr. Elliotson that the nickel should be again tried on the next morning.

Accordingly at nine o'clock, A.M., on August 17, the girls arrived, when Mr. Wood also attended, and, at the earnest request of Dr. Elliotson, the experiment with the nickel was renewed, the Doctor stating that he had no doubt that the apparent contradictions which had been exhibited on the previous evening arose from the circumstance that the *lead*, in the *three last experiments*, had been rubbed on *that portion of the skin where the nickel had been applied in the first experiment*, and that thus the effects which

were exhibited arose, in reality, not from the mesmeric influence of the lead, or the farthing, but from the mesmerised *nickel*. Mr. Wakley said that *he* believed that O'Key could herself give a better explanation of the nature of the supposed phenomena, than any other person.

The experiments were now again renewed, Mr. Wakley stating, however, that he could take no interest in them after the exposition of the previous evening. The piece of pasteboard being held before the girl's face, instead of applying the *nickel* Mr. Wakley used the *lead*. The patient repeatedly fell back, in the chair, during these operations, in what has been called the "mesmeric sleep." This apparent sleep was produced so repeatedly from the use of the lead, that Dr. Elliotson said he must admit that he had been deceived in supposing that *lead* could not convey the magnetic influence.

After a considerable time had elapsed the *nickel* was applied to her hand in the same way as the lead had been, both metals being of the same temperature. Apparent sleep was still the product, *without convulsions or rigidity*. At length Dr. Elliotson proposed that the nickel should be applied to the inside of *the lips*. The two metals were, therefore, thus used. *First* the lead, *then* the nickel; but the *lead* by far the more frequently. Presently all the effects which were represented as being the results of the application of the nickel, were apparent, and the patient appeared to be thrown into as violent a paroxysm as she had exhibited during the trials of the previous evening. Dr. Elliotson, in the performance of these experiments, complained "that the lead had been applied *too soon* after the nickel,—that *time* had not been given for the latter to operate,—and that it was not fair to use the lead so much more frequently than the nickel, but that the same chance should be given to the latter as to the former."

Mr. Wakley replied, that in testing the truth and accuracy of the alleged phenomena, any person would be justified in using *the lead* throughout the entire day, and not employing *the nickel* at all, especially since it had been contended that when the nickel was once used, frictions on the same parts, at subsequent periods, of remote dates, with *any other metal*, would produce the results which were attributed to nickel alone.

At this stage of the proceedings Mr. Wakley was obliged to leave the room to see a person on business, and before he could return Dr. Elliotson, who was pressed for time, left, with Mr. Wood. The Doctor took with him the nickel and lead, not knowing, probably, that it was intended to use them again. When Mr. Wakley returned, after an absence of about half an hour, he suggested that, although Dr. Elliotson and Mr. Wood had left, it might be well, for the purpose of presenting a brief report to the profession on the subject, to repeat, with all the necessary precautions against imposition, some of the experiments which had been so often reported in THE LANCET, made with mesmerised water, gold, &c. He then sent to Mr. Garden's for a lump of nickel, and had a musket ball beaten into the shape of the piece of nickel which had been used in the previous experiments. There were now present, besides Mr. Wakley, who conducted the experiments, Mr. Farr, Dr. P. Hennis Green, Mr. George Mills, and Mr. Clarke. Subsequently Mr. Hale Thomson and Mr. B. Tipper joined the party.

Jane O'Key.

It was arranged that the experiments should commence, on this occasion, with Jane O'Key, her sister being at the time labouring under the exhaustion of the apparent fit which had followed the use of the metals, and very few observations having as yet been made on Jane. Both sisters were kept in the adjoining room, while the experiments were arranged, and thence brought in as soon as the preparations were severally completed. The new investigation occupied about five hours, and consisted of the following series of experiments:—

Experiment 1.—Six wineglasses, nearly filled with tepid water, had, a considerable time previously, been placed on a table at a distance from each other at the end of the room, no person having been allowed to touch or go near them. The whole were unmesmerised. Jane O'Key being then called in, was requested to drink from each of them, successively, every person but herself keeping away from the table and the glasses. She complied.

No effect was produced, and she was then requested to retire.

Experiment 2.—The same six glasses, the water in the *fourth* having been strongly mesmerised, that is, according to the opinion of the believers in the doctrine, she was

again called in, and partook of the water in the whole of the glasses.

No effect was produced.

Experiment 3.—The same six glasses remained on the table. On this occasion the *fourth* glass, which had previously been mesmerised, was placed in the position of the first on the table, and was again mesmerised, the first being carefully shifted to the place of the fourth. All the others remained in their previous positions, and were untouched. She was again introduced, and drank from each.

No effect was produced from either, and she withdrew.

Experiment 4.—The six glasses remained on the table, untouched and unapproached by any one. After a few minutes had elapsed she was again called in and drank of the water in each.

No effect was produced, and she withdrew.

Experiment 5.—On this occasion the mode of proceeding was changed. The water was now *strongly mesmerised in the whole of the six glasses.* She partook of the whole.

Not the slightest effect was produced, and she withdrew.

Experiment 6.—Six glasses were again used, containing fresh water. None of them were mesmerised. She was again called in, and drank from the whole of them.

No effect was produced, and she retired.

Experiment 7.—Six glasses were again used. *All six were strongly mesmerised* by Dr. Green and Mr. Farr, who for a considerable time kept three fingers of each hand in the water of every glass. She came in and drank every drop from each glass.

No effect whatever was produced, and she withdrew.

It was now considered by Mr. Wakley that nothing could be more conclusive in refutation of the supposed influence of what has been denominated *mesmerised water*, on Jane O'Key, than the foregoing experiments, and that it was quite useless to pursue them any farther. This opinion was shared by every person present.* The investigation was then directed to the alleged influence of gold.

Experiment 8.—Five unmesmerised sovereigns had long been placed at some distance from each other on the table. One of them had been warmed in water at a temperature of 80 degrees, care being taken not to touch it with the fingers. Jane O'Key was now again called in, and directed to take each up separately. This she did.

No effect was produced, and she retired.

Experiment 9.—The whole five sovereigns being suffered still to remain *unmesmerised* she was recalled, and desired to take them all up, one after the other, retaining each in her hand until she had taken up the whole. She did so.

When she had seized the whole of them, in this manner, her hand appeared to be *spasmodically fixed.* This effect having been produced by *unmesmerised* sovereigns, it was thought right to reverse the proceeding, and mesmerise the whole of the sovereigns on the next trial.

Experiment 10.—The five sovereigns were all *mesmerised* under the influence of all the gentlemen present, by the formation of a "mesmeric battery." Jane O'Key was then again introduced, and took them up, and squeezed them, one after the other.

No effect was produced, and she retired.

Experiment 11.—The five sovereigns were again *all strongly mesmerised.* She was called in again, and desired to take them up and squeeze them. She did so.

No effect was produced, and she retired.

Experiment 12.—A sovereign, from another table, which had not been touched by the hand for a considerable time, and was completely *unmesmerised*, was now pushed on the floor, and slightly warmed by placing over it a jug which contained hot water. It should be stated here, in explanation of this experiment, that Jane O'Key, when desired by Dr. Elliotson to pick up a mesmerised sovereign from the ground, has almost invariably become "fixed," as she picked it up, time after time, in a gradation of attitudes, until the supposed influence of the magnetism was alleged to have died away. In the experiment now before us the sovereign had been slightly and guardedly *warmed*, and she was requested to take it up.

She did so, and walked away with it, when her hand became *fixed*, as the spectators watched for an effect, and the arm turned upwards behind her back, with the

* It should here be stated that Jane O'Key, at this time, appeared to be highly sensible to manipulations made in her view. She was repeatedly, during the day, fixed, or sent to sleep, by passes made before her, by pressure on the palms, by the touch of a "mesmerised" gold watch, and by pointing to her face.

clenched fist placed between the shoulders. In this state she walked about the room, and on being asked what had become of her hand, she said that she did not know. After the hand was loosened she was requested to retire.

Experiment 13.—A sovereign which had long been untouched, was knocked from the table with a stick, on to the floor, *thoroughly unmesmerised*. She was again called in, and requested to pick it up. She did so.

She was immediately *fixed*, while her hand was a few inches above the floor. On letting the metal drop she was again requested to raise it, and, on complying, a second time became *fixed*, with her hand a few inches higher from the floor. Having again let it fall, she was requested to pick it up a third time. She did so, and, for a third time, became *fixed* by the *unmesmerised* sovereign.

After this exhibition, and those which had preceded it, Mr. Wakley considered that it was quite unnecessary to perform another experiment with gold. Every person present concurred in opinion with him.

Experiment 14.—The girl was placed on a chair, and the pasteboard was held before her face. Mr. Wakley then took two flattened bullets, one in each hand, and rubbed them alternately on each hand of the same patient, Jane O'Key, six or seven times.

No effect was produced.

Experiment 15.—The eyes were then carefully covered with a thick bandage of silk, and the lead was rubbed several times along the inside of both lips.

No effect was produced.

Experiment 16.—A piece of *mesmerised nickel* was now applied to the insides of both lips.

No effect was produced.

Experiments 17, 18, 19.—This experiment was *repeated* three times more with the *same result*.

Experiments 20, 21, 22.—The *magnetised nickel* was now rubbed freely along the backs and the palms of the hands, unseen by the patient, *three* times, with the *same result*.

It was now agreed by all the gentlemen present, that it would be useless, and even ridiculous, to subject the alleged magnetic powers of Jane O'Key to a single additional test. The analysis was complete, and the conclusions were self-evident.

Elizabeth O'Key.

Experiment 23.—Six glasses of water were placed on the table, with all the precautions that were used in the case of Jane O'Key. Not a single glass was now mesmerised. Elizabeth O'Key was called in, and requested to drink from each glass. She did so.

She became *fixed* on restoring the *fourth* glass to the table. She then retired.

Experiment 24.—The same water and glasses were allowed to remain, but the *fourth* glass, which had just stupified her, was removed to the place of the second, and the second to the place of the fourth. She was again called in, and drank from the whole of the six glasses.

No effect was produced by either glass, and she again retired.

Experiment 25.—The same six glasses remaining as in the last experiment, the patient was again called in, the whole of the water being unmesmerised. She drank from each.

No effect was produced, and she retired.

Experiment 26.—The glasses and water again remained exactly in the *same state* as in the last experiment. No person had approached or touched either of them during the girl's absence from the room. She was was again called in.

On drinking from the *fifth* glass she became fixed for a few seconds, with her finger touching her forehead. On recovering from this state she retired.

Experiment 27.—The *same* six glasses, and the *same* water *unmesmerised*, as in the last experiment, were again used. No one had approached them. It was, however, agreed that Mr. Wakley and Dr. Green should stand, for a few seconds, near to the corner of the table on which the third and fourth glasses were placed, and then hastily quit that spot, so that on her coming into the room she might see them leave it.

On drinking from the *third* unmesmerised glass, she apparently became firmly fixed, with the glass in her hand, and after a few seconds, fell backwards, as if dead, on the floor.

Experiment 28.—The same six glasses were again employed, with *unmesmerised* water, and she was again called in, and drank from them all.

No effect was produced, and she retired.

Experiment 29.—Fresh water, at a temperature of 80 degrees, was now put into the six glasses, and the water in all the six was strongly "mesmerised" by fingers long held in the glasses, and by breathing on the water. She was again immediately called in, and voluntarily drank nearly the whole of the water, leaving only about an ounce in the last glass.

She was neither "fixed," nor "stupified," nor sent to "sleep" by the act, but on reaching the *fifth* glass she complained of sickness, by no means an improbable result, considering that in this experiment alone, she had swallowed altogether hardly less than a pint of warm water.

No other experiment with "mesmerised" water was required after this. Six glasses of water, which had been strongly impregnated with the subtle and marvellous "magnetic" fluid, had produced no effect on the patient, while in two other instances, mere sippings of the *unmesmerised* drink, appeared to produce stupefaction, sleep, rigidity, and, ultimately, in one case, prostration on the floor and snoring.

The girls had now been under experiment from nearly nine in the morning until ten in the evening, and as Elizabeth O'Key was evidently suffering from a sensation of sickness, and as there did not exist amongst the spectators two opinions as to the character and causes of the symptoms which had been observed, the experiments ceased, and the girls left Bedford-square for the hospital. After the girls had departed, Mr. Wakley made a few remarks on what had been witnessed, and declared that, in his opinion, the effects which were said to arise from what had been denominated "animal magnetism," constituted one of the completest delusions that the human mind ever entertained.

The accuracy of the description of the experiments herein recorded, has been affirmed by all the gentlemen present, three of whom, Mr. George Mills, Dr. Green, and Mr. Farr, took notes of them at the time of their performance, and from whose notes the above report has been prepared by two of them.

A careful perusal of the document which we have just printed, must furnish every intelligent inquirer with an excellent foundation for deriving no small portion of amusement from an examination of two letters, on the subject of "Animal Magnetism," which have lately been sent to a medical journal by Mr. Herbert Mayo, Senior Surgeon of the Middlesex Hospital, and lately a Professor of Anatomy and Physiology in King's College, London. Some years since we published in the pages of The Lancet, a description of a few odd specimens of ornithology. Amongst them a name and a place were assigned to Herbert Mayo. He was the favoured one of Minerva, and on him were bestowed the perch and the title of the Bird of Wisdom. He seems to be grateful for the pains that we took about him, and is still willing to offer the best proofs he can furnish of the keenness of our sagacity in detecting the weak qualities of mental attributes. Reader! Reader! the following letters are from the pen of a hospital surgeon of London, a lecturer on anatomy, and the author of an elaborate work on physiology! *

"Further Observations on Mesmerism.

"*To the Editor of the Medical Gazette.*

"Sir:—* * * The means which I have had of verifying the marvellous facts (relating to Elizabeth and Jane O'Key) that I venture to narrate, have been on the recent as on the former occasions of which I have availed myself, such as to satisfy me fully of their truth. * * *

"The mesmeric influence, whatever its source and nature may be, is capable of being communicated to, and retained in certain substances, and not in others. Among the substances which are capable of receiving and retaining the mesmeric influence, are gold, silver, platina, water, the moisture of the skin. Among the substances which are not, are copper, zinc, tin, pewter. If you hold a sovereign in your hand a minute, and then carefully wipe from it the moisture it may have contracted, the metal is found to have had imparted to it, and to retain for a time, some of the mesmeric influence. If either of the two O'Keys, when in mesmeric delirium, close her hand on a sovereign thus mesmerised, she either falls into mesmeric coma or into mesmeric trance, or her hand and arm, or her hand alone, become firmly fixed in mesmeric cramp. These four

* From the length of these letters, we are obliged to omit the least interesting parts of one of them. All the instructive portions, however, have been carefully retained.

effects are graduated results of different doses of the mesmeric influence, the first indicating the largest dose.

"In one of the sisters, the last or slightest effect, mesmeric cramp, is capable of being produced, *even when she is in her natural state*, by the contact of mesmerised metals. The cramp is just like common cramp; it is confined to the muscles of the part to which the mesmerised substance has been applied. It yields, when excited in the natural state, just as when excited in the state of delirium, to the influence of the fingers held pointed towards the cramped part, at the distance of half an inch or an inch. * * *

"The effect is well exemplified in the following instances:—Jane O'Key was told to close her hand upon a strongly mesmerised sovereign; she immediately, upon doing so, fell into mesmeric coma. Upon recovering, she was told to pick up the same sovereign which had fallen from her hand upon the floor. She stooped for this purpose, when immediately upon taking hold of the sovereign, she fell into the mesmeric trance, and remained fixed in a stooping posture, her hand touching the floor. Upon recovering (the sovereign having been, as before, removed from her hand without being again touched, however, by another's hand) and being told again to pick it up, she stooped, and having taken it up, had partly raised herself before the state of trance supervened. Upon recovering, being again bade to do the same, she had raised herself more nearly upright before the trance supervened. In the end, the sovereign, after seven or eight of these trials, had so little virtue left in it, that when taken up by her, it was some seconds before it affected her, and it then only produced cramp of the hand. Finally, this effect vanished; the mesmerising influence, originally communicated to the piece of money, having been expended.

"If a piece of metal that has been mesmerised, is left some minutes *untouched*, the virtue of the metal is equally found gradually to evaporate.

"The influence of quantity of metal in the experiment is thus shown:—Instead of one sovereign being used, half a dozen may be mesmerised, and placed together in the hand of the patient; upon this, coma instantly supervenes, which is much more profound, and lasts longer than that produced when one sovereign only is tried.

"To be shown the influence of different states of constitution, we went into one of the wards of the North London Hospital, when a sovereign was held in the hand by several patients in succession, which produced very different results when taken from each by the somnambulist. A patient with fever first held the sovereign, which was then taken by Jane O'Key, she being, as required in the experiment, in the state of mesmeric delirium, or somnambulism; no effect followed. No effect again followed when the same piece of money had been held by a young person who, having recently miscarried, was in a state of great bodily weakness. No effect again ensued when the sovereign had been held by a young woman, whose system was affected with mercury. On the other hand, a little girl in good health, but affected with ringworm, on holding the sovereign, mesmerised it so that it produced the state of trance in Jane O'Key on her taking it from her.

"* * * The moisture of the skin is capable of retaining and conveying the mesmeric influence. A halfpenny that has been held in the hand, is thus rendered capable of exciting mesmeric effects. When, however, the slight quantity of perspired fluid that may have been contracted by contact, has been removed from their surface, neither copper, zinc, tin, or pewter retain any portion of mesmeric influence. Nevertheless, one of the least of these metals (if not the rest) can *transmit* the mesmeric influence, which is shown remarkably by the present instance. Elizabeth O'Key being in mesmeric delirium held a pewter porringer in her hand by the handle: half a dozen mesmerised sovereigns were then placed in it; in a few minutes the trance supervened, and she was rapidly falling into coma. The sovereigns were then hastily removed, and in time to prevent the coma being perfected; so she recovered first into the state of trance, then into her ordinary state of delirium." * * * "When the mesmeric cramp is not relaxed, if the operator employs the agency of a non-mesmerisable substance, insinuating for example, with this object, a tin or brass extinguisher into the closed hand, the cramp is found speedily to yield to the ordinary manipulation, and the hand opens as quickly as if the mesmerised metal were not in it. The influence of the mesmerised metal is thus exactly neutralised by that of the non-mesmerisable substance. * * *

"In this marvellous inquiry, wonder succeeds wonder. As soon as one has become reconciled to the idea that the contact of one's hand can communicate to certain substances the mesmerising influence, one finds, beyond, a yet more unlikely fact to examine and to be compelled to admit. Simply looking upon a mesmerisable substance, placed at the distance of two feet from you, will mesmerise it. So if you look for a minute upon a sovereign placed at the distance indicated, and the patient then takes it and holds it, squeezing it in her hand, a slighter or greater degree of mesmeric effect follows. Nay, if you desire her to hold out both her hands (she being, of course, as for the other experiments, in the state of delirium), and you look for a minute intently upon one, and desire her to shut that hand, and to kept it so shut, squeezing

it hard at the same time, the same result ensues. The moisture upon the hand became mesmerised, and has affected her. In this experiment, her closing the hand you have not looked at, is followed by no mesmeric effect.

"There remains to be mentioned another instance even more improbable than the last. If you look for a minute fixedly upon one spot of a mesmerisable surface, as, for instance, a stone mantle-shelf, and a sovereign is then placed by the patient herself on the spot which you have looked at (the sovereign having been ascertained, the instant before, not to be mesmerised), if the sovereign be allowed to remain a minute on the spot that you have so looked at, then, on the somnambulist taking up the piece of money, mesmeric effects follow. For the sake of brevity, I do not mention the precautions taken to prevent the patient in this and other experiments *guessing when the effect is to take place, and when it is not;* I shall only repeat that I have seen these experiments so conducted, that *I am certain* the patient was not aware of the result which was expected to follow, and which did not fail to follow.

"Thus, by *looking* upon a mesmerisable body, you may so mesmerise it, that another mesmerisable substance *laid* upon it *shall from it be mesmerised sufficiently to produce decided mesmeric effects upon patients susceptible of this peculiar agency.*

"The facts which I have thus narrated, and others that I have before communicated through the pages of this journal, seem to me sufficient to establish the existence of a peculiar *physical influence* that emanates from living beings, and is capable of producing sensible effects upon a greater or less number of our own species, and of one or more species of the lower animals. I have looked into the subject, in its speculative bearings only, as a branch, not of therapeutics, but of physiological science. So considered, its interest goes far beyond that of any new class of phenomena which has come under my observation. * * *

"In my last letter I mentioned two instances of *prevision* manifested by Elizabeth O'Key, and observed that they might be explained by supposing either that she unintentionally caused the disorders which she imagined herself to foresee, or that she *actually foresaw them.* I will mention another, in which I find it very difficult to suppose the first of these two explanations sufficient. A month before the 14th of June, Elizabeth O'Key declared during the mesmeric trance, that on that day her usual delirium would assume a new character; that she would then cease to be without common bodily feeling, as hitherto was her state (and as her sister remains) during the mesmeric delirium or somnambulism. On the evening of the 13th of June, Elizabeth O'Key was placed in the state of delirium; and she was then found to be, as she had always before been, insensible to touch, when in that state. On the morning of the 14th, she was again rendered delirious, when she now evidently had feeling, exactly as in her natural state. She has since continued to preserve common sensibility whenever the delirium has returned. It appears to me more difficult to suppose that the patient's imagination produced this difference in herself, than that she actually foresaw its occurrence

"Subsequently to my last communication, I have witnessed in Elizabeth O'Key the marvellous phenomenon of transposition of sensation. I have seen her on three occasions suddenly assume a new condition, and be without eye-sight, hearing, touch, or taste; while she has distinctly perceived some objects placed a few inches from her through a sense, more akin to vision than to any other, that has been suddenly developed in her hand. In making this statement, indeed, I am painfully aware that my testimony will not be received, as I have reason to think it would be, if given in evidence of anything popularly credible; nevertheless I venture, as the phenomenon is purely physiological, to expect thus much of my readers, that they will take the trouble of seeing the condition I describe, before they declare my interpretation of it to be false.

"I think that the phenomena of prevision and transposition of sensation (and those of clairvoyance likewise, if the latter are true, and there is anything in them beyond the workings of an over-active imagination) naturally lead to the supposition, that they result from *the workings of a spiritual nature, in a certain independance of those bodily organs to which it is normally closely tied and bound.* It is conceivable, that, in such cases as I have described, when all the common avenues of sensation are occluded—when eye-sight, taste, touch, hearing, are suspended—and when a sort of vision is sensibly exercised by some part of the common surface of the body—that these phenomena arise from the *mind being in part dislocated and displaced from her corporeal tenement, holding on with misplaced attributes to unaccustomed points and corners of the frame.* It is conceivable, again, that in that wrapt and mysterious state, in which the individual is giving utterance to remote anticipations that are strangely verified, the mind is acting independently of its usual organs, and, with the character of spirituality, is freed from the restraints of time, as in clairvoyance (if that state ever exist), it would appear to be partially free from the restraints of space. Man, we are told, was made in the image of God: these may be partial revealings of the parity of the spiritual nature of the created being to that of his Creator. * * *

I am, Sir, your obedient servant,

"August 8, 1838." "HERBERT MAYO.

"NEW NAME PROPOSED FOR MESMERISM.

"*To the Editor of the Medical Gazette.*

"SIR:—It has been suggested to me that another name should be substituted for those hitherto employed to denote the remarkable class of phenomena of which I have recently sent you some accounts. It has been observed, that the term 'animal magnetism' is objectionable, from its suggesting an affinity, which does not exist, between these phenomena and common magnetism; and that both with that term and with 'mesmerism' so much imposture and roguery are associated, that on that account the sooner both are got rid of the better.

"In their place I therefore propose the term *exoneurism* (from ἐξω and νευρον) to express the class of phenomena; and for the adjectival form, the word *exoneural*.

"The word exoneurism happens to be appropriate to both kinds of phenomena which the present inquiry embraces; of which one is, the change produced in the nervous system of a living being by a peculiar influence *from without*, or (looking to the cause instead of to the effect) the action of the nervous influence of a living being *beyond* the limits of its frame: the other, and the more questionable, being the action of the mental principle independently of or *without* its usual organs.

"The *ordinary* phenomena of the nervous system may be classed as *esoneural*.

"I have now completed the fostering offices towards mesmerism, which its forlorn condition appeared to me to claim for it, as soon as I detected beneath its dirt and frippery the marks of an honest extraction. I have viewed it as stolen at its birth by quackery from science. I have endeavoured to restore it to its true rank and place. I have clothed it in a dress in which its proper parent need no longer be ashamed to own it. I have finally contrived for it something like a philosophic appellation. I am, Sir, your obedient servant,

"HERBERT MAYO.

"19, George-street, Hanover-square, August 24th, 1838."

First Principles of Medicine. By ARCHIBALD BILLING, M.D. Third Edition.

THE foundation of medicine is certainly the "observation of facts;" but facts, however carefully observed and scrupulously recorded, would, comparatively speaking, remain barren or of little moment unless they be so viewed as to give rise to general principles. This is the great difficulty by which we are met in our endeavours to elevate medicine to the rank of a science. We have facts in abundance, but it requires the exercise of the highest order of intelligence to deduce from them the laws which govern, both in health and in disease, the wonderful machine called man.

Several attempts, indeed, have been made to discover and apply these general principles, but the greater number of them have failed, partly because the corner stone of the doctrine was nothing more than a mere hypothesis, and partly because of the obscure and mystified language in which the communications alluded to were wrapped up. From such reproaches the work now before us is entirely free. The language is throughout clear, simple, and divested, as far as the nature of the subject would permit, of technicalities, while the greater part of the general principles and doctrines inculcated by Dr. Billing is based on sound views of physiology and pathology.

The nature of Dr. Billing's work is such as, of necessity, to place it beyond the reach of analysis; we are, therefore, compelled to confine our observations to a slight sketch, chiefly derived from remarks with which the author closes his account of the action of remedial agents. The first portion of the work is occupied by a consideration of the nature and treatment of inflammation. This latter state, which the author (in opposition to most writers, though in our opinion, judiciously) regards as being *always* a diseased one, "consists in a diminution of organic action in the capillaries, in consequence of which they become relaxed, and the blood is admitted in excess." The proximate cause of this relaxation is a diminution of nervous influence, leaving the capillaries destitute, and thus permitting them to *yield* immediately to the ordinary injecting force of the heart.

This definition of the nature and proximate cause of inflammation approaches very closely to the truth; but it does not enable us to distinguish sufficiently between inflammation and congestion, if, as the author teaches, the latter exist in the arteries, and be produced by a simple loading of the vessels with blood. Dr. Billing, indeed, says, "The difference between congestion and inflammation is, that in congestion there is rather distension of vessels; in inflammation, there is more or less alteration of tissue, connected generally with deposition in some way of coagulable lymph." If the difference between inflammation and congestion consist in this "more or less alteration of

tissue," it becomes a matter of great importance to point out the precise nature of such alteration; this, however, the author has omitted to do, and has, accordingly, confounded two very opposite states,—a lapsus which might have been avoided by confining the term congestion to an overloading of the venous system.

Having explained the nature and cause of inflammation, Dr. Billing examines the various modes of action of antiphlogistic remedies, and points out, in a very clear and philosophical manner, the principles which should guide the practitioner in their application. Here the author, as he himself tells us, appears as a distinguished *solidist*, or advocate of *neuro-pathology*. According to the views of Dr. Billing "all diseases commence by disturbance of the function of the solid parts of the machine, and first of all, of the nervous system; inflammation of cellular tissue, bone, conjunctiva &c., through mechanical or other violence, result in consequence of injury to the peripheral nerves and to the capillaries;" hence it is to this system that our chief remedies are to be addressed, either directly or through the medium of the circulation. We must refer our readers for a further insight into Dr. Billing's opinion with regard to the action of stimulants, sedatives, narcotics and tonics, to the work itself, for it is impossible to comprise within our limits the general views which the author gives of therapeutics. The theory of fever is but a modification of that of inflammation. Dr. Billing considers that "it arises from injury to the nervous centres, either from peripheral injury propagated to them, or through lesion by miasma, which, by the route of the circulation, directly poisons them, most probably by chemical combination and alteration, instantaneously lowering their power or energy."

The class of diseases commonly denominated neuroses, or diseases of morbid sensibility, are shown to depend either on a general or partial derangement of the nervous system, arising, when general, either from the disordered state being propagated to the central organs from a distant region of the body, from a wound, a poison, &c., or from a debilitating cause. Finally, after diseases of morbid sensibility, the author discusses some which he considers to be allied naturally to fevers, viz., ague, cholera, and influenza, and terminates his work by general observations on affections of the skin and diseased states of the capillaries.

There will be found, perhaps, scattered here and there in the work of Dr. Billing, some particular theories or opinions, from which a number of our readers might be inclined to dissent; but the same objection (if in the present state of our knowledge it can be called one) would apply with still greater force to most other works on "the Principles of Medicine;" we can, therefore, strongly recommend Dr. Billing's "Principles" as a code of instructions which should be constantly present to the mind of every well-informed and philosophical practitioner of medicine.

CURE OF ARTIFICIAL ANUS.

The method adopted by the late Baron Dupuytren for the cure of artificial anus is well known to our readers, and is the one which is now almost universally employed by surgeons. In certain cases, however, especially where the septum (eperon) between the two ends of the intestine does not project much, a cure has been obtained by turning up a flap from the neighbouring parts, and uniting it over the surface of the wound. The following is an example of the perfect success of this simple method, in the hands of M. Blandin, to whom we are indebted for various other improvements in the art of autoplasty:—

A man, 52 years of age, had been for a great length of time afflicted with inguinal hernia, when he was suddenly seized, about three years ago, with all the symptoms of strangulation of the gut. The assistance of a surgeon was not demanded until a considerable time had elapsed, and after gangrene had set in; the medical attendant, therefore, merely employed such means as were best calculated to favour the separation of the dead parts, and the free discharge of the fæcal matter. These means were attended with full success, and at the end of 15 days the man recovered his health, with the exception of a large perforation in the right inguinal region, through which nearly the whole of the interior of the cœcum could be seen. He remained in this state for three years; occasionally a portion of the intestinal canal became everted through the opening, but the man was careful to restore it as soon as possible, and exercise compression over the part. By these means relief was generally obtained, but near the end of February last, such a quantity of intestine escaped through the opening, that the un-

fortunate man was unable to return it; the surgeon who was called in was equally unfortunate. In this state the poor man came to Paris, and immediately sought relief at the Hôtel-Dieu. The following was the appearance of the parts on his reception into the hospital:—A tumour as large as a double fist, and lined with injected mucous membrane, occupied the whole of the right inguinal region; the vermicular motion of the intestines was manifest over its surface; at the inner and upper part was seen an opening of an elongated shape; a great quantity of liquid fæcal matter was discharged through this opening; no evacuation took place through the anus, and the patient was extremely reduced in flesh.

After careful and long-continued pressure for more than a quarter of an hour, the everted mass of intestine was returned to the cavity of the abdomen; this consisted of the ascending colon, the lower portion of the ileum, and a part of the cœcum. The opening in the abdominal parietes was now found to be nearly circular, and of a diameter of an inch and a quarter; a strong compress and bandage were applied to prevent a fresh escape of the intestine. This was attended with very considerable success; the fæces were no longer discharged through the abnormal opening, but although mechanical means were employed the size of the opening could not be sufficiently reduced to lead to the hope of a final cure. M. Blandin therefore determined on refreshing the edges of the wound, and uniting them by suture; this was done on two several occasions, but failed; a portion of integument was then dissected off from the neighbouring parts and laid over the artificial opening, but united along an exposed surface at a little distance from the edges.

On the fourth day the flap was found to be united all round the wound, except at the upper part. After the lapse of fifteen days this upper edge, and the corresponding border of the flap were again refreshed, and united by a few more points of suture; this was successful; the fissure united and one or two minute openings readily closed on being touched with the nitrate of silver.—*Bul. de l'Acad. de Medécine.*

MR. LOWRY'S EXAMINATION.

To the Editor.—SIR:—I have read with much indignation, though not with surprise, Mr. Lowry's statement of his examination by the blunderers of Rhubarb Hall. It is evident that the Examiners are ignorant of the fact that *pelvis* is either masculine or feminine. It is used with the feminine adjective by Propertius, the prince of elegiac poets among the Latins:—"Qui nunc jacet *horrida* pelvis." Your obedient servant,

ANTHROPOS.

UNIVERSITY OF LONDON.

To the Editor.—SIR:—The University of London has now been in possession of its Charter for more than twelve months, but as yet, its operations have been studiously concealed from the public eye. Many members of the medical profession are anxiously expecting that this institution will afford them an opportunity of taking degrees in Arts or Medicine, without being subjected to the degrading impositions of the London College of Physicians, or the more costly and absurd practice of residing at Oxford or Cambridge. But as yet, Sir, the intentions of the University on the qualifications for the degree have not transpired. If, therefore, you can state the course of study and the terms required from candidates for the degrees which will be granted by the institution, you will confer a favour on a large portion of your readers. I am, Sir, your obedient servant,

MEDICUS.

Peckham, Aug. 21, 1838.

We regret that we cannot furnish our correspondent with any satisfactory information on the subject of his very reasonable inquiry.—ED. L.

INSANITY.—The Acts 2 and 3, and 3 and 4, of Wm. IV., relating to the "Care and Treatment of Insane Persons in England," which would have expired at the end of the recent session of Parliament, were extended by another Act of Parliament, passed on the 10th of August last, for three years, and from thence to the end of the then next session of Parliament.

TO CORRESPONDENTS.

The length of our report upon animal magnetism has compelled us to postpone the insertion of numerous articles and communications; amongst others, reports from the British Medical Association, the British Association for the Advancement of Science, &c. &c.

The paper of *Mr. Liston* has been received.

We shall be glad to receive the *facts* alluded to by *H. G.*

The Correspondent who makes inquiry respecting the gratuitous admission of medical officers in the army to the metropolitan theatres of medicine and anatomy, must search for an answer in the forthcoming prospectuses of the schools.

The letter of *Mr. Merrah* has reached us.